How Far Can You Go? Rationality Models in Layoff Location

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Master Thesis

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Management summary

The act of laying off workers as management practice dates back to the industrial revolution and the advent of the first factories in the late 18th, early 19th century. During the years the practice has consolidated its position amongst practitioners as one of the first and potentially most effective ways to reduce cost, streamline operations and prune deadwood (De Meuse, Bergmann, Venderheinden, and Roraff, 2004). However, researchers have not found empirical evidence for such argumentations, and no consensus is yet reached on whether workforce reductions enhance or hurt corporate performance. Reasons that can explain the contrasting evidences may be found in the act of laying off itself, rather than in the causes and circumstances that trigger them.

Furthermore, if we consider the devastating impact on societies, companies and individuals that downsizing initiatives can have, it is easy to imagine how such activity can foster concerns either from the governments' side, which would want to avoid them, and from the same management, which is put under a great deal of pressure from both stockholders and employees.
These different concerns and multiple interests-to-bear are argued to be responsible for the biased decision making process of managers regarding where to downsize within the company network, and may provide an explanation for the unanswered question of whether or not layoffs improve company performance.

In this study, at first it is hypothesized that, because of governments' economic incentives to abroad downsizers, managers will downsize abroad, sacrificing the optimal layoff implementation strategy for a superior availability of financial resources granted by the aids. The hypothesis is verified in the case layoffs are measured as the relative local number of employees, giving support for the fact that external interventions alter the economically optimal implementation strategy.

The distance at which layoff occurs then depends on the level of emotional elements affecting the decision making process. When it comes to demanding decisions such as to reduce work force and lay off employees, managers make choices that are influenced by emotions. If executives rather layoff abroad compared to the home country because of the "social threat" that close by layoffs can cause, then, the farther the subsidiary is located, the easier it is for them to lay off. Again the hypothesis finds support when layoffs are measured compared to local employment, providing evidence that managers' emotional ties too affects the layoff implementation strategies, favoring *friendlier* workforce reduction at closer subsidiaries than at farther ones.

For what concerns the effects that such biased decision making processes have on corporate performance the two perspectives yield contrasting or inconclusive results.
Government incentives appear to have a positive effect on the accounting measure of performance in the short and mid term, supporting the fact that, thanks to the aids, the company is able to be profitable already in the year after the abroad layoff and for the subsequent years. However market measures show that stock markets do not value positively such external intervention in corporate decisions and the market performance for abroad downsizers are negative.

Finally, distance is proposed to mitigate the alleged positive effect of layoffs on performance. Although single country assessments partially support the theory, the overall analysis is inconclusive since no positive or negative effect of distance on the aforesaid relation is witnessed.

In the end, this study provides the basis for a new stream of research which centers its attention on the possible confounding effects influencing corporate decision making, with specific regard to downsizing activities. It also tries to explain why the layoffs are so often implemented but the effects on performance are not always the searched ones.
What has been found in this study suggests that managers are not exempt from external and emotional interferences. Accordingly, managers should be aware of the disrupting effect that the acceptance of the aid programs have on firm's stocks and market value. Such aids should be accepted only when the company has not the necessary strength to recover from its distress and there is no other way of retrieving capitals.
A recent example is supplied by the "*Big three"* US automakers. Despite the initial benefits that GM and Chrysler enjoyed thanks to the aids, Ford demonstrated through time to be more appreciated by markets for its shunning bailouts then its cross-town rivals, securing higher returns from its stocks.
Moreover, a heterogeneous composition of the management board would allow alleviating the effects that emotions and social ties have on the decision making processes of managers.
Layoffs are a powerful but difficult to use tool for corporate restructuring. In order to enjoy its positive effects and to limit its downsides conscious and accurate management is needed.

Foreward

This thesis represents the final work to complete my Master in Strategic Management at Tilburg University.

Thinking back at when I started, I must admit that I had some worries about having to write this Master thesis. The University from which I came was not so requiring in terms of the final work, even though being an important and well recognized University. Additionally, Tilburg University's reputation for being a research-oriented university left me with even more concerns. Nonetheless, I was fortunate of having Dr. Aswin van Oijen proposing me, and few other students, a topical argument which later became the argument of this thesis and that I liked researching.

Writing the thesis took me time, but, to remain on the topic, also distance contributed to stretch the process, since I mostly wrote from my home country, Italy. I learned a lot from it, not only on the topic itself, which I did not know much previously, but on how to approach and handle research and how to discuss and write scientifically, and I believe such stands out already from reading the thesis.

Said that, I would like to thank Professor Van Oijen (as I always called him in our online conversations) for the constant support and availability and for the helpful comments. It was nice to work with you.

Regrettably, this work also concludes my long, rarely discouraging, but always fun and cheerful time as student. Consequently, I would like to thank all the people that I met along the way and that have been part of my life helping me growing academically and personally. Special thanks go to the friends I made in Holland; you welcomed me as a friend since day one and helped me coming back hosting me all the time. I wish you the best of luck on your future projects, and I hope to continue seeing each other irrespective of what the future holds for us. A thought goes also to my friends back in Italy that have kept being my friends despite the many times I left them to pursue my studies abroad losing track of me. Not many people would have done the same. Thank you. In particular, I would much like to thank my friend Riccardo who has contributed to my thesis with his time and knowledge.

Above all, sincere thanks go to my parents who have unconditionally and relentlessly supported me in all these years and in all my decisions. They have never forced me or decided for me, I really appreciated that.

In the end, a simple saying that have helped me until now and I hope it will continue to light my path in the future to come: Catch every opportunity it comes on your way, but do not wait for them, do not rush either, but always look for them; and never stop.

Nicola Barban

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Chapter 1 – Introduction

1.1 Introduction

This chapter introduces the argument of thesis and presents a general overview of its contents and structure. Section 1.2 identifies the gap in the literature and contextualizes the thesis. Section 1.3 presents the problem statement and discusses the thesis' key concepts. In section 1.4 the problem statement is divided in several research questions, while the last paragraph explains the structure of the thesis and how it is designed.

1.2 Problem indication

During the current economic turbulence facing corporations, executives are searching for strategies that will enable the firm to survive and potentially grow. The most common and diffuse strategic action undertaken in these situations is corporate restructuring. The core idea is that changing and rearranging the organization, re-planning its operations and spinning-off divisions would, in the end, spur company's performance. Nevertheless, independently by which form of corporate restructuring is implemented (portfolio, financial or organizational) it usually leads to the downsizing of considerable numbers of employees (Bowman, Singh, Useem and Bhadury, 1999; Couke, Pennings and Sleuwaegen, 2007).

Literature have so far mainly focused on two important aspects of the downsizing practice, that are, why organizations downsize and what are the consequences on corporate performance.
Reasons to downsize pertain to the sphere of *economic* (downsizing is caused by a search for productivity and efficiency), *institutional* (downsizing is impelled by social conventions that define it as good or effective management) and the *sociocognitive* (downsizing is caused by the self-creating belief of downsizing being effective and unavoidable) motives (McKinley, Zhao and Rust, 2000; Mentzer, 1996). The consequences for performance have been explained with the *psychological contract* theory, and again, with *economic* theory (De Meuse et al., 2004, Wagar, 1998, 2001).

This study instead departs from these two standpoints on layoffs, adopting a new and unexplored point of view to explain the success or failure of the downsizing campaigns. As a matter of fact, the layoff implementation strategy is here considered as important as its causes in determining the layoffs' outcomes.

Because in the recent economic phase downsizing appears almost unavoidable, the question that is now looming in many firms' management boards is where to implement layoffs. Hence, the research will investigate where, within the company network, layoffs take place and how this sort of decisions affects corporate performance. For the purpose, Geographic Distance is proposed as the variable that may influence the decisions and the outcomes of such strategic action.

The thesis will assess layoff implementation strategies from the two perspectives. Firstly, the rational approach will determine whether abroad layoffs are preferred over home ones because of governmental external intervention, in light of the management ultimate goal of boosting corporate performance.
Secondly, the non-rational approach will argue that other elements, such as emotions and feelings may alter the optimal decision making of managers (Landier, Nair and Wulf, 2009; Van de Laar and de Neubourg, 2006; Mentzer, 1996), using distance as discriminator for their biased decision process. Finally the repercussions that both perspectives and the relative layoffs implementation strategies proposed have on corporate performance are investigated.

1.3 Problem statement

How do the layoff location and its distance from the headquarter influence corporate decision making and company performance?

The key concepts of this research are defined below, but they are further explained and substantiated in the coming chapters.

- Layoff is defined in literature in several ways. For this thesis however, the following definition is proposed: 'an intended reduction of personnel in an attempt to improve the organization's competitive position in the marketplace'.
  Throughout the thesis, the terms layoffs, (employee) downsizing, workforce reduction are used interchangeably.

- Layoff location intends the country in which the company dismisses employees.

- Distance in this thesis always refers to geographic distance, a measure of the geographic space stretching between two separate locations.

- Companies object of the thesis are multinational corporations with headquarters in either Canada or Germany.

- The time window of the thesis spans a ten year period, from 1999 until 2008, thus covering at least a full economic cycle of both growth and recession.

1.4 Research questions

In order to satisfactorily answer the problem statement, the following research questions are formulated:

1) How do organizations behave in layoff decision making situations?

2) Is there a link between the places where layoffs occur and the consequences for corporate performance?

3) How can the relationships between layoff's location and layoff strategies and between distance and post-layoff corporate performance be conceptualized and operationalized?

4) Where do multinationals perform their downsizing activities and what are the repercussions for performance?

5) What type of relationships exists between layoffs implementation strategies, distance and corporate performance?

1.5 Research design and structure

The proceeding of the thesis is designed to answer progressively the research questions and to arrive in the end to conclude on the problem statement. Accordingly, to answer the first two questions, an extensive literature review is presented. The sources used consist primarily of quality academic journals, but also (financial) daily newspapers and magazines from around the globe supply the necessary link to the actual economic world. Chapter two introduces the constituting concepts of layoffs and distance and develops the framework upon which the dichotomic perspectives are built. Chapter three then presents past studies on the layoff-performance relationship and advocates the thesis' standpoint on the issue. Both chapters conclude with the enunciation of one hypothesis per perspective. Chapter four covers the sample selection and data collection, along with the presentation of the control variables, answering research

question three. The fourth research question requires the analysis of the dataset and chapter five provides that, along with the hypotheses testing results. Finally, chapter 6 concludes by discussing the findings, presenting limitations and contributions of the study and suggesting possible future researches.

Chapter 2 – Theoretical framework

2.1 Introduction

The following chapter focuses on the concepts of Geographic distance and Layoff. In the first two paragraphs, past literature on the subjects is reviewed, followed by the thesis' definitions of the concepts. Once these elements are presented, the last part of the chapter will contextualize them into two different perspectives which will try to explain how organizations behave in layoff decision making situations.

2.2 Geographic distance

It is of major relevance to define univocally what is meant by distance in this paper. In fact, drawing from different fields of research, especially marketing or entrepreneurship, but also strategic or international management literature, various meanings and concepts have been offered concerning distance.

Among the most important, the concepts of Cultural distance and Psychic distance have collected large consensus in the scientific community.

Briefly, Cultural distance refers to the original work of Hofstede (1983) in which he categorizes selected traits in national culture and upon those he *measures* differences between countries (Pagell, Katz and Sheu, 2005). Individualism, masculinity, power distance and uncertainty avoidance are the four categorizations proposed and they refer to the different attitudes, beliefs and behaviours that can be found in *distant* working environments.

Psychic distance instead is "the sum of factors preventing or disturbing the flows of information between firm and markets" (Johanson and Wiedersheim-Paul, 1975 p.308, cited by Brewer, 2007: 44) and depends on perceived difference between countries. Language spoken, level of development, political system and business practices are all examples of factors entering the Psychic distance measure.

As notable, both measures of distance however refer to attributes that are in the sphere of human perception and of aleatory measurement outcomes which limit their ability to yield reliable results. In addiction, the presence of a wide variety of factors entering the equation and the number of interpretations that distance can assume in these acceptations contributes to make its operationalization difficult and prone to critics.

For the purpose of the research it is necessary to take a step back from these articulated and complex definitions and go back to a more simple and easy to measure variable such as distance as we commonly

acknowledge it. In other words, distance here is explicitly intended in its pure spatial version, as measure of the geographic space stretching between two separate places, and it is not related in any way to non-spatial interpretations as could be for Psychic or Cultural distance.

The choice of such measure is based on the idea that distance, especially geographical one, is a very important factor that influences people's decisions, and in this context, managers with layoff issues. To a broader extent, Landier et al. (2009) argue that geographic distance, or, in their words, *geographic dispersion* is able to greatly affect corporate decision making processes. Similar to the arguments of this paper, they believe that there are at least two reasons why geographic dispersion and corporate decision making might be related.

One is the *information quality* that is available to decision makers. Distance affects the means of information acquisition and the nature of the information acquired: Far away relationships (for example between headquarter and subsidiary) allow for a smaller amount of information exchange than shorter distance ones. In fact, if for short distances it is possible to collect information through personal and impersonal means, impersonal means are the only or the prevalent way over longer distances. This way decision makers face information asymmetries between subsidiaries that alter their optimal decision process.

The second reason is the amount and type of *social interaction* that the decision maker has with his or her staff and with the corporate employees in general. As Landier et al. note, managers are more concerned about employees with whom they interact more frequently and they "internalize how their decisions affect local employees and local community welfare" (Landier et al., 2009: 1121).

Besides pure geographic distance reasoning, the relevance of spatial distance at all levels and in all subjects is testified also by authors that researched the complex models of psychic and cultural distance. One example is the Dow and Karunaratna (2006) article where they found that of all the possible dimensions of Psychic distance, "geographic distance is the single most influential 'trade inhibitor'. Geographic distance accounts for almost twice as much total variance explained as all the other psychic distance stimuli combined; and this is for a set of industries explicitly identified as having low transportation costs!" (Dow at al., 2006: 593)

Also from this evidence, it is possible to deduce that distance does not only increase the goods' and services' direct costs, but it is able to greatly influence the organization's decision making process.

Because of the major influence that it has in decision making, and thanks to its intrinsic effectiveness and simplicity of measurement, geographic distance will be preferred to other, more complex, dimensions of distance as determinant for the investigation.

Specifically, distance will be approached to a particular application of decision making: layoff decisions. Before studying the possible relationship between the two variables though, the following paragraph introduces and defines layoff as for the proceeding of the thesis.

2.3 Layoff

Despite the vast literature about layoff, there are few aspects of such practice on which theorists agree upon. Because of these divergences, the following paragraph presents different definitions of layoff in order to arrive at this paper's definition. Next, in brief, the questions of why, when and how, will find some answers from past literature in order to supply the reader with a general idea of how complicated such a topic is and why so many authors continue to study it.

At first, the abundant literature on the subject suggests that "the definition of downsizing is not without controversy" (Mentzer, 1996: 237). Some authors define strictly what downsizing is, others, such as Mentzer, adopt a broader view on layoffs. For Mentzer, "downsizing consists of any reduction in number of employees"(Mentzer, 1996: 238), hence departing from the definition offered by Cameron et al. some years prior (Cameron, Freeman and Mishra, 1991; Freeman and Cameron, 1993). These last authors have a narrower concept of downsizing and in particular they emphasize its intentional nature. They also distinguish downsizing from layoff or decline. McKinley, Zhao and Rust (2000: 227) report such distinction and explain that "*downsizing* is an intentional, proactive management strategy, whereas *decline* [and layoff] is an environmental or organizational phenomenon that occurs involuntarily and results in erosion of an organization's resource base." Bowman, Singh, Useem, and Bhadury (1999) question if restructuring improves economic performance and divide restructuring practices in portfolio, financial and organizational restructuring. They suggest that organizational restructuring most of the times coincides with downsizing or "in some instances it has been defined as an end in itself [of restructuring]" (Bowman et al., 1999: 44). Again, Budros (1999: 70) describes downsizing as: "An organization's conscious use of permanent personnel reductions in an attempt to improve its efficiency and/or effectiveness." An important aspect of layoffs that emerges from Budros' definition is that the company can use layoffs as a tool to improve its efficiency and effectiveness, but it is only an attempt and the results are uncertain.

In light of the many connotations of layoffs offered, the definition here proposed is a combination of the most valuable contributions these authors provided. Nonetheless it is important to keep in mind that what is relevant for this investigation is the decision and the consequent mise-en-place of work force reduction practices that can occur through dismissal, layoffs, firing, contract terminations or early retirement programs. It is not here researched how employees are laid off, but instead where, when, and how many are "cut-off". Furthermore, the temporal aspect of downsizing is not under evaluation in this paper. There will not be distinction between permanent or temporary layoffs as in Budros' characterization (1999).

Another well-studied aspect of layoff is its intentionality. The majority of authors consider layoff practices as something that managers are consciously recurring to and spend (hopefully) a great deal of time reflecting on before taking such decisions. Authors like Freeman and Cameron, Cascio, McKinley, De Meuse, or Budros, all explicitly refer to downsizing as a conscious and intended reduction of personnel. Also for this research, its intentional character is embedded in the definition of layoff in light of the economic or social reasons that move executives toward such practice.
At this point it is appropriate to finally give the paper definition for layoff, since most of the main literature contributions on the subject have been revised. This paper will treat downsizing and layoff as synonyms and consider them as *an intended reduction of personnel in an attempt to improve the organization's competitive position in the marketplace.*

Still, the question of why organizations downsize is yet to be answered. Above all, the primary argument that practitioners refer to when justifying their choices on workforce reduction is for economic reasons.
Because of the delicacy and the debate that such issue evokes among company managers and literates, the third chapter is dedicated to its presentation and discussion.

In conclusion, it should be now clear that the layoff practice is not a straightforward subject which is based on an univocal discipline that employs mathematical formulas in order to decide whether to "invest or divest" in workforce. On the contrary, it is a managerial decision, based on personal knowledge and sense of responsibility, where factors like managers' personality, experience and also feelings play a role and are able to greatly influence such choices.
Continuing what many [more titled] authors have done before me, I developed a framework to test if a certain level of personal feelings and preferences of executives is able to influence their layoff decisions and the consequent implementation. In the next paragraph, this, as well as the rational perspective, will be correlated with distance with the aim of unveiling new insight on where multinationals lay off.

2.4 Theoretical perspectives

Rational and arational models constitute the most studied and accepted categorization of layoff choices. Although they mainly have been developed to answer questions regarding why companies downsize, or, to some extent, when they do it (in response to economic crises, rather than when other "reference" companies did and so on), they can also provide answer to the question of where organizations lay off. Specifically, in this study the rational perspective applies to the corporate decisions

of whether to lay off at home or abroad whilst the non-rational perspective finds application in answering how the subsidiaries' distance from the headquarters may influence the layoff implementation strategies.
Basically, with the rational perspective I make explicit reference to managerial choices that are economic in nature, while the non-rational perspective involves the emotions and feelings that push executives to make decisions that are beyond the mere economic rationale.
Before starting any argumentation though, it is worth noting that, similar to the original enunciations of the rational and non-rational perspectives, also for this research the two concepts do not exclude each other, instead, "they complement rather than replace the core rational accounts of organizations" (Faifua and Harding, 2007: 409). In fact, the hypotheses derived from the two perspectives are linked and helpful in explaining the two faces of the same medal.

2.4.1 Rational perspective

Because of their size and number of employees, multinationals and their subsidiaries are the ones most subject to government pressures to limit layoffs, at least in their home country. Especially during economic slumps, government pressures and incentives to non-downsizing companies reach their highest point. Without going back long ago, it is possible to find evidence of governments that promulgated policies and promoted measures oriented to save their major factories from bankruptcy or "simply" offering monetary incentives for those that did not lay off their workers massively. This consideration is not limited to communist governments or new developing countries, examples of such measures come from western, industrialized nations. One example for all is Renault S.A. and the French government. As reported by the Wall Street Journal (online edition, March 19, 2009) "Renault SA's factory in [Sandouville] is one of the car maker's most unproductive in the world. Yet it has no choice but to keep the assembly line running." This because of an agreement signed with the UMP party of the French president Sarkozy for which, in order to receive a much needed loan to continue its operations, the company must maintain open the factory in Normandy (and all its factories in France), giving employment to its redundant workers. Consequently, for Renault S.A. and any other company in analogous situations, if the redundancy of jobs exists, and the company is not able to eliminate them in its least productive site, it still has to trim its costs and cut employees somewhere else. What Messieurs Chatel, the French industry minister appointed for this delicate matter, said in an interview is paradoxical:"The big question for the European auto industry 'is where to close factories'. We just don't want them to close in France!"(WSJ Online edition, March 19, 2009).
Nonetheless this argument is not confined in France, or limited to the auto industry. Washington is battling the recession with its deepest intervention in the economy since the Great Depression, making the U.S. government a central player in industries ranging from banking to insurance to autos. In Germany,

the politicians are under pressure from labour unions and others to protect local jobs. In the U.K., government bailouts of banks have come with demands that the recipients increase their lending to British consumers and businesses.

Maintaining the focus on layoff decisions and linking those decisions (in light of the economic aids given by governments) to the rational approach, two implications of where companies downsize must be balanced. First of all it is essential to remember that the rational approach implies that senior executives make rational, logical decisions and it is built on the assumption that downsizing is a managerial response to decreased profitability. Thus, from this premise we can infer that managers, in case of reduced profitability of their company, will do their best to reduce costs and eliminate those inefficiencies that undermine the well-being of the company. The vast literature on corporate restructuring then demonstrates that, most of the times, these actions lead to corporate downsizing and employees layoffs (Sutton, D'Aunno, 1989).

When the reduced profitability occurs to multinationals and to major companies of a country, the implications for the economy of that country are relevant. Governments therefore feel the need to help those companies through loans, tax reductions, and easy terms of payments. But these facilitations and aids come to a price for the company, which usually consists of maintaining the production in the home country and limited, or none, layoff allowance in the home country.

Still, it is worth noting that this chain of events does not occur only during generalized crises, but they take place at any moment as testified by the numerous cases across countries' boards and across industries. The primary conditions "required" to justify such government intervention is a national interest which is related to the number of employees employed by the organization and the amount of layoffs expected. Besides employment concerns, governments look also to the utility and return that they can obtain from these manoeuvres. In fact, most of the times, these interventions are addressed exclusively to organizations established in the country. A reason is that company's captains of multinationals usually have tight relations with politics and it is easy for them to negotiate such aids with the home-country governments. Plus, there are no barriers raised by distance when the interventions are targeted to businesses located within the country. Last, but not least, large, international organizations are seen as standard bearer of the country around the world; as example of professionalism and excellence in their respective industry. Therefore the government is encouraged to help those corporations in economic difficulties in order to perpetrate the successful image of the country, at the expense of foreign owned companies.

Consequences of these policies are that executives are tempted to accept the government loans but at the same time, in order to reach back a certain level of efficiency, are obliged to reduce their personnel somewhere else, and they can do it only in their foreign subsidiaries.

Thus far, the rational perspective has moved from the concept that companies lay off employees in response to the not optimal level of their performances and to restore their competitiveness. Because of that, it is believed that companies may prefer to lay off abroad in order to enjoy of the economic incentives that they might receive from their home country governments on the condition that they do not lay off employees in the headquarter country.

Nevertheless, other reasons can be found to justify this alleged tendency. As a matter of fact, wage level differences across countries, industry type, corporate, division and subsidiary performance or company size can all explain or affect the choices of where to layoff. However, in light of the recent world economic outcomes and the number of testimonies that report of governmental interventions in support of threatened organizations, the line of reasoning here developed may uncover new insights on the matter that have not find space in literature so far.

In conclusion, the rational perspective developed here supports the fact that downsizing corporations will decide to layoff abroad instead of in the home-country because of the incentives and economic aids that this practice may grant them. Consequently, the hypothesis that is generated is a dichotomy between home and abroad layoff.

HP1: Multinationals are more likely to lay off employees abroad that in the home-country.

In the next paragraph the non-rational perspective will go deeper in the analysis of this dichotomy and will assess how the distance between headquarters and abroad subsidiary affects the place and size of the layoff.

2.4.2 Non-rational perspective

The non-rational perspective of this paper is based on the arational concepts as depicted by McKinley or Budros, and it is essentially a contraposition of the rational perspective. Although, as I said, the two approaches are complimentary, they stand opposite on the rationality scale. On one end the rational/economic approach postulates the highest level of rationality for managers, which leads to economically oriented choices. On the other side the non-rational perspective has arational logic to the extent that "choices are based on cultural, taken-for-grantedness, interorganizational network, socialization" and other processes "with no direct bearing on internal functional requirements" (Budros, 1999: 72).

Before dealing more in depth with the non-rational perspective though, it is necessary to explain the two assumptions upon which the construct is founded.

First of all it is indispensable to acknowledge the relevance that emotions have in decision-making processes. Regarding the matter, Van de Laar and De Neuborg (2006) conducted an illuminating study that explored theoretically and empirically how emotional factors play a role in foreign direct investments (FDI) decisions. They surveyed managers of 219 firms that had serious intentions of investing in foreign markets and they noted that "approximately half of the respondents implied that 'emotional' elements played a role in making choices both regarding the decision to invest and the choice of the country" (Van de Laar et al., 2006: 208). Although their study was specifically addressed to FDI decisions, their results and conclusions enjoy of a high degree of generalizability to corporate decision-making processes.
Just like FDI decision makers, downsizing decision makers "suffer" from emotional interferences that somewhat inhibit their rationality. Wright and Barling, in their research on the effect of downsizing practices on downsizers suggest that "laying others off is professionally demanding and produces guilt, role overload, work-family conflict, emotional exhaustion, decreased well-being and loneliness" (Wright and Barling, 1998: 351). It also emerged that the decision-makers' psychological well-being is critical to the success of the downsizing.

The other major assumption of the non-rational approach is that "the actions of human agents are informed by the interaction with their socio-cultural environment" (Werner, 2008: 155). To some degree this implication is comparable to that of institutional theory in which actors are influenced by the common and shared practices of the collectivity. It also constitutes the starting point of McKinley's sociocognitive perspective for which the interactions between managers at a microlevel help to build a shared path in decision-making. More than just that, this second assumption acknowledges the presence of relations within firm agents either occupying equal position, or between people with subordinate relationships and with different roles and responsibilities. These relations are usually not only formal and impersonal, but go beyond the formal boundaries and affect executives' personality and disposition.

After having enunciated the two underlying assumptions, it is easy to understand the difference that elapses between the rational and non-rational perspective. While in the former there is no space for factors influencing decision makers other than economic ones, in the latter, the human and "sociological" aspects of decision makers assume central importance. As a matter of fact, this approach recognizes the fact that managers are human beings as anyone, with different personalities and feelings. When it comes to demanding decisions as to reduce work force and lay off employees, they make choices that are influenced by emotions. Wright and Barling (1998: 352) noted that "layoff experiences change work and personal values and beliefs [of executives that lay off] and also their relationships with staff and families." Emotions like guilt or the fear for the hostility of the survivors are among the main drivers of biased decision processes.
The result of acknowledging these "disturbing" factors shows its potential not on the act of laying off itself, but it alters the way it is implemented, affecting in particular the place and amount of the layoff.

Similarly to the rational one, the non-rational perspective argues that executives will prefer to lay off employees outside the country in which the company headquarter is located, and the size of the layoff will be larger for the foreign company subsidiaries than for the home country factories.
Further motivation for executives to lay off abroad is to preserve the group of people to which they feel to belong to and that they see or talk to everyday. As reported by Mentzer (1996) a motivation that pushes managers to layoff abroad rather than in the home country is indeed the sort of affiliations and gratitude that firms have toward their home country and fellow-citizens. He noticed that for two of his regressions "companies tended to downsize if their largest stockholder was not Canadian, rising the spectre of multinationals laying off Canadians to protect jobs in the headquarter country" (Mentzer, 1996: 246). His findings witness the fact that multinationals, or any company with interests that go beyond their own country boards, have compelling reasons to save jobs in their home country more than saving them anywhere else.

Building from these arguments, and pushing them even farther, it is interesting to introduce in this context the variable Distance as measure of the effectiveness of the construct developed thus far. The idea is that if executives rather layoff abroad compared to the home country because of the "social threat" that close by layoffs can cause, then, the farther the subsidiary is located, the easier it is for them to layoff. Vice versa, it should be easier to witness layoffs far away from the company's home country, than in the same home country.
According to the assumptions afore illustrated, explanations for such conclusions are found in the fact that the more distant the subsidiary is, the less knowledge the headquarters might have of it, of the people employed and their status. Executives also may not be worried of the consequences that layoffs might have in far away countries because unaware or poorly informed. Recollecting Wright and Barling (2004), the feelings of guilt and the fear of seeing their relations with staff and families altered are lower than the cases of close by layoffs, which, in addiction, would affect "their own people". In this setting it is clear that managers favour the option of far away layoffs in order to save themselves and their people compared to the discontent that near layoffs can create.
Consequently, the hypothesis relative to the non-rational perspectives is as follows:

HP2: The more the distance, the larger the amount and size of layoffs.

2.5 Summary

In sum, two different and antithetical (at least in their underlying theory) perspectives on where managers lay off their employees have been presented. Both assert that executives will choose the abroad-layoff option instead of laying off in the home-country because of economic (rational perspective) or emotional and social (non-rational perspective) reasons. In addition, the non-rational approach expands its considerations acknowledging for the factor Distance as enhancer of the likelihood of far away layoffs.
By now it should be clear how the two perspectives, even if antithetical, are also complementary. To the first hypothesis, which accounts only for an "in or out" solution, a second perspective, the non-rational one, is added, which recognizes the same path in layoff decision making, but it also integrates it investigating where specifically the layoff take place within the company network.

Now that the first contribution of this paper on the layoff issue has been presented and explained, the following chapter will build on the same idea of managerial preference for abroad layoffs and their consequent distance from the home country to investigate whether such tendency is valuable in terms of company performance. More precisely, it will study how layoff distance from the headquarter influence the economic performance of the company.

Chapter 3 – Layoff and performance

3.1 Introduction

Early in this paper a vast literature was presented regarding layoff in most of its aspects and implications. However, company performance and layoff were purposely left out from the presentation because it is considered a topic on its own due to its relevance and to the amount of studies that investigated it. Many authors granted specific attention to the matter and in order to comply with this general thinking I reserved the next chapter exclusively to the issue of company performance and layoff.
Nevertheless, this investigation departs from the common layoff-performance relation studies. In fact, it is believed that, assessing the layoff-performance issue from a different perspective, it will not only unveil new insights on downsizing, but hopefully it will also contribute in untangling part of the broader original issue of the efficacy of layoffs in restoring company performance. Thus, the primary focus of this chapter is to discover whether there is a link between the places where layoffs occur and the consequences on corporate performance. In other words, I want to assess if the apparent inefficacy in improving performance through layoffs is related to some extent to where layoffs occur geographically within the organization network.

In order to investigate such issue and to link it with the hypotheses on the layoff place of occurrence, the two previously introduced rationality models will be extended to incorporate concerns regarding performance. Consistently with the presentation scheme of the previous chapter, after each perspective's integration, the relative hypothesis linking layoff implementation strategy and its effects on performance will be enunciated.
Yet, before that, a review of some of the most influential papers on the matter will be given in order to supply the reader with the general trends and findings of the relative specialized literature.

3.2 Theory review

So far, for what concerns the relationship between layoff and performance, practitioners and literates have not found a common ground on which to agree upon. The big debate rises by the alleged efficacy in improving company performance. In fact, to the continuous recurring to layoffs by managers, literates respond with diffused scepticism.
From the practitioners' point of view, layoffs "reduce operating costs, eliminate unnecessary levels of management, streamline operations, enable an organization to prone deadwood, enhance overall

effectiveness, and ultimately make a company more competitive in today's marketplace (De Meuse et al., 2004:156). In light of these motivations, the managerial approach to layoff can be associated with the rational perspective. As a matter of fact, managers portray themselves as rational and performance oriented actors, who sometimes have to recur to unpleasant decisions in order to maintain or improve their company's economic situation. They see downsizing as a painful, but necessary practice that must be pursued if an organization is to flourish in the future (Mentzer, 1996).

However, theorists and researchers are struggling to find support for such logic; rather, they noted that so many downsizing efforts failed to meet organizational objectives (Wagar, 1998). Many studies have been proposed on the issue, but their results are often contrasting.
Appendix 3.1 presents some valuable studies that address the matter and search for explanations for the continuous recurring to layoffs by managers. They have been selected because they do not limit their focus only on whether layoff affects performance or vice versa, but they also offer different perspectives and insights on the relation.
Here only the major findings and implications of the articles are discussed.

The articles can be grouped in three categories: those that find a negative relation between layoff and performance; those which do not find any relation; and those that appear to support the effectiveness of downsizing in enhancing company performance.

Among the first group of studies, Worrel, Davidson and Sharma (1991) and Iqbal and Shekhar (1995) determine that, on average, there is a small but negative reaction of stock markets to layoffs.
This reaction is then exacerbated by whether the company is in financial distress or not. However, the two studies arrive to opposite conclusions on the matter. In fact, if Worrel et al. record larger negative swings in stock markets reactions to layoffs by financially distressed firms, Iqbal at al. find that stockholders value layoffs in "healthy firms" as a potential disruption of company's resources, thus negatively responding to them.
Iqbal and Shekhar also assess accounting performance measures and find evidences for a decline in earnings after layoffs.
Bowman, Singh, Useem and Bhadury (1999) are too grouped in the first category, since they demonstrate that, of the three main types of restructuring practices (financial, portfolio and organizational), organizational restructuring is the least beneficial for company performance. Specifically, they note that "layoffs unaccompanied by other organizational changes tend to have a negative impact on performance" (Bowman et al., 1999: 48).

Continuing, Mentzer's (1996) and Cascio's (1998) articles pertain to the group of authors that could not find any significant link between layoff and performance.

In his article, Mentzer proposes three different categorization of the drivers and consequences of layoffs based on the level of rationality of the mangers. The three categorizations correspond to the *rational* or economic approach (extreme rationality of actors); *asymmetric* or *hysteretic* approach (flawed perceptual process and rationality); and the *institutional* approach (the weakest rationality level of the three).

As said, Mentzer's data analysis does not lend clear support for any of the three approaches to downsizing and explanation for these weak results might be found in the fact that managerial behaviour reflects a mixture of these models, and that none of them prevails over the others.

Using a similar theoretical construction, Cascio expands Mentzer's testing utilizing a broader number of financial indexes in order to detect the slightest modification in performance due to the implementation of layoffs. At last, also Cascio had to admit that: "downsizing *per se* did not appear to improve company financial performance, nor did it have a detrimental effect on company financial performance" (Cascio, 1998: 69).

Finally, Brickley and van Drunen (1990), and De Meuse, Bergmann, Vanderheinden and Roraff (2004) are amongst the few authors that succeeded in finding a positive relation between layoff and performance. Although Brickley at al. noticed a positive market reaction to layoff announcements, the magnitude of the reaction is modest (less the one percent), and such favourable effect is not replicated for accounting measures. They also list a number of factors influencing the relation, which can vary from the rational behind the restructuring, the amount of information disclosed with the announcement, or also if the company has been previously (potential) target for hostile takeovers.

De Meuse et al. instead assume a different approach to access the effects of layoffs on performance compared to the studies so far presented. As a matter of fact, they consider an extended time frame of 12 years in order to better evaluate the effects that such corporate level initiative has on firm performance.

What they notice is that, even if layoffs do not appear to supply downsizing companies with any competitive advantage and thus superior performance compared to non-downsizers, those who implemented workforce reductions because underperforming their counterparts were eventually able to restore their competitiveness and, from the third year after the layoff, they were able to match their competitors' performance. This result is particularly illuminating since it proves that corporate level actions require a longer time to produce the intended results, and studies which collect data only for two or three years prior and following the layoff suffer from timeframe bias.

Notwithstanding, it is important to not overly dramatize the findings, either negative, positive or null. Many are the factors that affect the financial health of companies and consequently make downsizing actions effective or not and no single study can accurately consider every possible confounding variable

(Mentzer, 1996). Even if extending the time of observation is a further increment toward a more valid series of results, still many other effects should be controlled for before univocally settling the matter. De Meuse et al. admit that, "perhaps, the most appropriate conclusion that one can draw from this study is that downsizing appears to be somewhat related to financial performance of a company" (De Meuse et al., 2004: 174). This conclusion may seem over-simplistic in light of the broad implications of the article's findings, but it is a big step forward for the studies on the relation between layoff and company performance.

3.3 Theoretical perspectives

At this point, different articles, perspectives and findings regarding layoff and corporate performance have been presented. Still, a first comment that can be made is the fact that all these articles intend layoff as the primary corporate-level activity that, through cost reductions, is able to restore a certain amount of financial resources for the company. In addition to this diffused form of capital gathering, the last chapter introduced other possible sources of capitals capable of integrating and enhancing the benefits of the downsizing practice. However, as it will be further explained next, such sources, specifically, governmental aids towards downsizing companies, are subject to issue conditions which often impede or alter the optimal implementation strategy of the layoff programs.

A second comment is that most of the models so far presented do not account for other drivers besides performance that may influence managerial decision making. Nevertheless, as Van de Laar et al. (2006) noted, other fields of research have proved the importance of emotions in influencing the decision making process, while it is surprising that in decision making theories, emotions are still largely excluded.

The following theoretical development will draw from these last two comments in order to investigate their repercussions on the layoff-performance relationship.

3.3.1 Rational perspective and performance

In chapter 2, a layoff was defined as: *an intended reduction of personnel in an attempt to improve the organization's competitive position in the marketplace.*

From the definition of layoff given, it emerges that downsizing is endogenously oriented towards performance. More precisely, thanks to an "*improved competitive position in the marketplace*" a company can achieve better performances than those obtained prior to the layoff.

Within such connotation the rational perspective finds its full application. Recollecting from the last chapter then, the rational approach to layoff decision making is characterized by two main implications.
First of all, the organization, and consequently its management, is intendely rational and efficiency oriented (McKinley et al., 2000). Managers respond to negative alterations in the company's competitiveness and performance adopting the best strategy aimed exclusively to restore them. Moreover, it was noted that the first measure to which companies recur when looking for a drastic cost reduction is employees' layoff (Bowman et al., 1999).
Secondly, governments fear such measure, because, in light of the size of the organizations involved, mass layoffs would boost the country's unemployment rates, with dramatic repercussion on the economy (and on the government popularity rating). Consequently, especially during economic downturns in which layoffs and downsizing occur on a daily basis, many governments around the world promote measures and provide incentives to corporations that limit their downsizing activities.

Lately, one method in particular captured the attention of the media. It consists in offering financial incentives to companies in exchange for their commitment to limit, or even avoid, any layoff in the home country.
An example of such practice was already mentioned and refers to the case of Renault SA and the French government. Briefly, Renault SA has a highly unproductive factory in France, but in order to enjoy of the bailout promised by the government, the management agreed to re-plan where to lay off its redundant workers. As a result, since the company did not want to renounce to the needed financial aid, but also had to reduce its workforce in order to re-establish cost efficiency in the vehicle production, the layoffs occurred in the Renault subsidiaries outside France.

In general, because of the rationality character embedded in the perspective, managers are expected to accept the aids and consequently downsize abroad, sacrificing to an extent what should be the optimal restructuring, in exchange for an extra injection of financial resources. It is expected because, at least in the short term, the benefits of the governmental financial subsidies should outweigh, with very few exceptions, the benefits owed to cost savings and production efficiency improvements of well targeted layoffs.

This is in apparent contrast with the evidences found in previous literature about where, within the company network, layoffs bring the biggest improvements in performance. In fact, even if very few authors have faced the issue, there seems to be support for the fact that at-home layoffs may generate superior financial returns compared to abroad ones. One example is Landier, Nair and Wulf's 2009 article. According to them "geographical distance prevents financially optimal restructuring by management, [and] in-state divestiture might be good news for shareholders" (Landier et al., 2009:1138).

However, consistently with the first hypothesis of the paper and with the extreme rationality of the actors postulated by the perspective, state intervention should guarantee a larger impact on corporate performance than an ad hoc restructuring-through-layoff plan.
As a matter of fact, the first problem that companies face when trying to recover from economic slumps is the lack of financial resources to invest in the renewing of the old businesses and to finance new and valuable investment projects. While, as in Landier at al's study, on average, companies have mainly cost cuts that can help them to find the necessary financial resources, corporations which fall within the governmental aid conditions enjoy of a larger amount of these resources. It should be then "easier" for them to invest in valuable restructuring programs and develop new solutions to exit the downturn.
Following this line of reasoning it is finally possible to conclude that companies which downsized abroad and consequently benefited from external financial support should be able to generate higher returns and better performance than companies which laid off at home, but did not receive any external aid.

The external intervention of governments thus assumes great relevance in the layoff-performance dichotomy. As argued, it appears capable of overturning the hierarchies of where the layoff implementation creates more value and generates superior financial performance. Consistently with the arguments just presented, the following hypothesis is put forward.

HP 3: *The financial performance of multinationals which downsized prevalently at home will be lower than companies which downsized prevalently abroad*.

On one side the hypothesis shares the same theory and implications of the paper's first hypothesis, since it is developed accordingly to the same rational perspective, on the other, however, it departs from it because of its more specific focus on performance.

3.3.2 Non-rational perspective and performance

Just like it was done for the rational perspective when linked to performance, also for the non-rational perspective I will use the same arguments and assumptions that constituted the original enunciation to illustrate how such perspective may impact corporate performance.
First of all it is indispensable to remember that the two perspectives are antithetical since they presuppose opposite rationality levels for their actors. Furthermore, while the two perspectives were also complementary in their first enunciation here they lose such character.

That said, the non-rational perspective is constituted by two main assumptions: The presence of emotional elements which interfere with the decision making processes, and the social interactions of human agents, in the specific case, executives.

The former assumption implies that emotions intervene during the decision making process of managers who consequently are induced, as Van de Laar et al. (2006) demonstrated, to make decisions that are far from being rationality driven and exclusively performance oriented. Instead, such decisions may incorporate the feelings and concerns that are haunting managers, thus altering what would be the optimal solution for the company.

The latter one then completes the first "emotional" assumption explaining what sort of concerns cause the biased decision making processes. The subjects of those concerns are found within the firm's boundaries, and are constituted by all company's employees and managers at all levels and positions. Additionally, managerial concerns derive also from the community in which the company is settled in and, as Mentzer (1996) extended, from the country in which the company located its headquarter.

In sum, consistently with Landier at al., it is possible to conclude that "managers are more concerned about employees with whom they interact more frequently" and they "internalize how their decisions affect local employees and local community welfare" (Landier et al., 2009: 1121).

Accordingly, in this theoretical setting it is theorized that managers would avoid layoffs in in-state offices and factories and would implement layoffs preferably in the company's foreign subsidiaries in order to protect their communities and fellow citizens. However, as it was mentioned in the rational perspective, this result is surprising considering the fact that prior studies appear to support at-home layoff as the most likely to create superior value for the company, compared to abroad ones.

Nevertheless, this finding demonstrates once again the limited rational accounts and economic attitude of the non rational perspective. Managers here try to balance between the company interest of value creation and their personal feelings and preoccupations, such as the concerns for the job security for their proximate colleagues and fellow citizens.

Furthermore, the non rational perspective did not limit its investigations on establishing if layoffs occur in the companies' home-country or in their foreign subsidiaries, but it integrates its theoretical framework adding Distance as discriminating variable. Through the expansion of the previously developed framework Distance is used as enhancer of the likelihood of far away layoffs. In fact, it is argued that, if "executives rather layoff abroad compared to the home country because of the 'social threat' that close by layoffs can cause, then, the farther the subsidiary is located, the easier it is for them to layoff"(paragraph 2.4.2).

However, as it was noted already for the two assumptions, this logic is poorly grounded on economic reasoning. As also Landier et al. noted, "social interactions with proximate employees lead to a potential

disconnect between managerial incentives and shareholders' interests" and "social considerations can lead to conflict with shareholder wealth maximization" (Landier et al, 2009: 1120-1121).

By now it should be clear why this perspective is in contrast with the rational one. Here, managerial decisions are not led by pure economic concerns for the company, but emotions, fears, and personal feelings affect the decision making process of executives. This makes the layoff a compromise between economic and social interests. On one side, layoff is necessary in order to guarantee the resources needed to the firm to continue its operations or simply to become more efficient; on the other end, managers implement layoffs where they feel they would "hurt" less, but, as seen, to the detriment of corporate performance.

Consequently it is argued that, because of the limited economic rationale for layoff decision making postulated in the non rational perspective, the further the layoff occur from the home-country, the less beneficial such action will be for corporate performance.

The hypothesis that is looming then is the following:

HP 4: *The relationship between layoff and corporate financial performance is moderated by distance.*

3.4 Summary

The chapter has built from the previously presented perspectives to add the implications that the two managerial rational may have on corporate performance. Still, a final consideration can be derived from the two approaches and their four hypotheses.

While for the rational approach there is congruency between the first hypothesis on where layoffs occur and where is best for corporate performance, such congruency is not valid for the non rational one. As a matter of fact, the rational perspective moves its arguing straight from economic concerns and performance orientation, while the non rational perspective justifies the managerial choice of where to layoff with extra-organizational reasoning. This makes the two non-rational hypotheses presented conflicting with one another: executives are expected to layoff far away, but such practice appears not to be the most beneficial for the company and its performance.

After the next chapter which deals with the methods of research utilized and presents the variables object of the analysis, the data analysis will hopefully unveil which and in what measure is the best perspective in representing managerial choices on where to layoff.

Charter 4 - Research methods

4.1 Introduction

The following chapter is aimed to introduce the sample of the research, how it was constituted and the analysis methods utilized to verify the aforesaid hypotheses.
As emerged during the course of the presentation, the primary object of the study is to unveil the relationship between geographic distance and layoff strategies. Because of this search for new insight on the layoff issue, the research can be labelled as exploratory. Moreover, it is also causal since it seeks to demonstrate the relationship existing between layoff, distance, and company performance variables.
Next, the sample object of research will be introduced along with considerations about the countries investigated, the variables used and the methods applied.

4.2 Sample composition and work division

Originally, the study on the relationship between layoff and distance was meant to include a large database of multinational corporations with headquarter in one of three predetermined countries, so to guarantee a higher external validity of the findings.
With the aim of sharing the complete dataset, the sample was divided between three strategic management master students with the task, for each of them, to gather data for one particular country. Each student then was free to write his/her thesis on the aspect of layoffs that they considered most interesting.
The countries were selected to represent different managerial styles and law systems, but because time constraints and observations availability the original choice had to be modified and in the end only two countries dataset became available: Canada and Germany.
Personally, I researched Canada and consequently the whole chapter will deal specifically with how I collected data about Canadian companies. Nonetheless, since the data collection was a joint effort of more than one student, the methods and solutions adopted to gather the data had to be, and indeed are, similar, if not identical, so not to compromise the validity of the data with observer errors.

For the full descriptions of the research methods and data collection techniques adopted to investigate Germany, refer to Arts S. (2009) *The effect of distance on the relationship between employee layoffs and performance*.

In addition, appendix 4.1 gives a brief presentation of Canada in terms of its economic environment and legal system.

4.3 Sample selection and data collection

Data were collected from the following sources.

Multinational corporations with headquarter in Canada were originally selected going through the *Investor 500* (2009) list. The list is edited by the *Canadian Business* magazine and it is the magazine's annual survey of Canada's five hundred largest publicly traded companies. This first selection guarantees for each firm to be Canadian and have its headquarter in Canada. Plus, sorting the list for market capitalization and using the *Investor 500* profile page in combination with the firms' web site for information, it was possible to file a list of 50 companies that suited the sample specifications for size (mid to large capitalized firms) and worldwide presence (only international corporations and multinationals with subsidiaries within and outside Canada were taken in consideration).

Layoff announcements instead were obtained from *LexisNexis Academic* database. The database stores a vast collection of articles from international newspapers, legal magazines, public records and business information.

Using the list of companies just drafted, the articles were retrieved from LexisNexis Academic utilizing the "company name" AND "layoff" as search words and limiting the search for the 1998 to 2009 time period. Since such time frame in many occasions was too broad, delivering an overload of results, it had been divided into six two-year periods and, within such division, the results were once again refined selecting for the company name. At this point, the articles were chosen by looking at their title and by relevance in the article preview section. Those articles considered interesting were read in full. Additionally, when certain layoff observations were ambiguous or not clear, a further specific search was made accounting for the company, the year and the country of layoff occurrence.

LexisNexis Academic was also a mean to retrieve data regarding companies' employment levels, either at corporate, regional or country level. Nonetheless, such data were compared with the information available in the respective company website, going through their annual reports and investor communications. Additionally, *Sedar.com* website was another valuable source to access securities related information for Canadian companies.

Despite the meticulous search for layoff observations and employment levels data, many were still cases of missing or ambiguous data. As last resource, singularly addressed e-mails have been sent to the HR and communication offices of all the companies, but unfortunately, few corporations had the time to respond to my inquiries or provided detailed answers.

For these cases then, it is assumed that the size of the layoff and the number of employees of the company disclosed in the articles are the exact figures that indeed took place. Such assumption is not new in layoff literature and, as De Meuse et al. (2004) noted, many previous studies recurred to it for their data collection.

For what concerns geographic distance, I determined the distances using the *horlogeparlante.com* website which estimates the total air distance (in kilometres) stretching between two locations filled in by the user. The two locations utilized for the distance count were the headquarter town of the company, and the capital city of the nation in which the subsidiary was located. This was done because it was very difficult to collect information regarding in which exact plant the layoff occurred when corporations had many different production sites in the same country. Whenever the layoff occurred in the home-country then, the geographic distance associated was set at 0.
Additionally, often corporations did not disclose the exact place of the layoff or the number of people employed in a specific country; instead they would announce only the geographic region in which to expect layoffs and the total number of people employed in the region. In order to overcome such data limit, only those "macro" observations that would not be ambiguous in any way about their appurtenance to the in-state or abroad layoff group were left in the sample. This means that, in case a Canadian company announced job cuts throughout North America, such observation had to be deleted, because it was unclear on whether it belonged to the at-home or abroad group. Conversely, observations of layoffs in Europe, or in EMEA countries, were kept in the sample since they are undoubtedly outside Canada.
For these macro observations, middle points for Asia, Europe and EMEA countries were arbitrarily selected and the choices fell on respectively Lhasa (China), Frankfort (Germany) and Djamena (Chad).

Finally, performance data for each corporation were retrieved thanks to the *Bloomberg professional* service. *Bloomberg professional* is among the leaders in electronic financial data provision and it is the most complete and reliable source of real-time and historical financial news and information for any company listed in any worldwide stock exchange.

Performance data at country level instead were collected thanks to the *OECD*, the *World Bank* and the *IMF* web sites. Still, although GDP growth rates were available for all the countries listed in the sample, Output Gap measures were not. Consequently, it became necessary to build an estimation that could fit all the observations, so as not to witness discrepancies between them. Giorno, Richardson, Roseveare and Van den Noord's 1995 article presents how the OECD measures such index, and, following their indications, the new output gap measure was determined recurring to the Hodrick-Prescott filter for smoothing GDP, with a weighting factor (λ) of 25.

4.4 Measures

All the variables object of the research have already been mentioned in their respective theoretical formulation. However, important aspects of their operationalization need to be further developed and specified.

*Size of layoff_* concerns the people laid off in each observation recorded. It can be measured in three different ways, thus assuming three possible dimensions.
First dimension is layoff size expressed in *absolute numbers*. This is the mere number of people dismissed, irrespective of the people employed globally or locally by the enterprise.
Second dimension is *Total share of layoff*. This measure of size represents the relative number of employees laid off per observation compared to the global work force of the company. Compared to absolute numbers, the dimension should be more efficient in portraying the impact of the layoff on the firm's human capital.
Third and last dimension of size is *Local share of layoff*. It is estimated by the percentage of people laid off in a specific location (within the company network) relatively to total workers employed in that country by the company. This dimension incorporates the demography of the company and should provide insights on the relations existing between headquarters and foreign subsidiaries and how the corporate network employment is managed with respect to other factors (*i.e.* the independent variables).

*Frequency of layoffs_* is the number of times, comprised in the time window of the study that the company lays off workers in the home country compared to other locations.

*Distance_* measured in kilometres, it is the distance stretching between the company headquarters and the country capital where the layoff occurred.

*Company performance_* is constituted by both accounting (with ROE, ROA and ROI) and financial (with two different operationalization of the Tobin's Q) measures chosen to portray the most reliable picture of the companies' economic situations (Rowe, and Morrow, 1999). The indexes have been tracked for the ten-year period (plus 1 extra year: 1998) object of the study. The formulas and explanations of the indexes considered are presented in Appendix 4.2.

4.5 Control variables

Aside from the rational and non-rational explanations for layoff choices given in chapter two and three and the researched effect of geographic distance on layoff decision making, other possible factors may influence the layoff's implementation strategy and its impact on corporate performance.
Table 4.1 lists the control variables considered in this study, their operationalisation and the hypotheses in which they find application. For the singular description of each variable instead, please refer to appendix 4.3**.**

Table 4.1 Control variables

Control variable	**Operationalization**	**Hypotheses controlled**
Firm size (Total assets)	The firm's total assets	1; 2
Firm size (LN(Tot assets)	The natural logarithm of the firm's total assets	1; 2
Firm performance (ROE)	Net income divided by shareholder equity	1; 2
Firm performance (ROA)	Net income divided by total assets	1; 2
Firm performance (ROI)	EBIT divided by net investments	1; 2
State of the economy (GDP growth)	Annual percentage growth rate of GDP at market prices based on constant local currency. Estimated both for the home country and for the country where the layoff occurs	1; 2; 3; 4
State of the economy (Output gap)	The difference between actual and potential GDP as percentage of potential GDP. Estimated both for the home country and for the country where the layoff occurs	1; 2; 3; 4
Industry specific effect (1 digit)	Dummy variables associated to differences in the first digit of industrial SIC codes	1; 2; 3; 4
Industry specific effect (2 digits)	Dummy variables associated to differences in the first 2 digits of industrial SIC codes	1; 2; 3; 4
Firm specific effect	Dummy variables associated to the firms	1; 2; 3; 4
Year specific effect	Dummy variables associated to each of the ten-year window	1; 2
Geographic region effect	Dummy variable associated to the region of the firm's headquarter settlement (Europe vs. North America)	1; 2; 3; 4
Firm geographic dispersion	Number of countries in which the firm operates	1

4.6 Data analysis techniques

In order to solve the thesis data analysis, a technical solution for the sample composition is necessary. To test hypotheses one and two, the sample is considered as a whole, with layoffs observations stretching throughout the 10 year window, and companies' performance for 11 years. For hypotheses three and four instead, the last three years (2006, 2007, 2008) of layoff observations are left out, while all performance observations are conserved. This choice is made compulsory by the investigation proposed in order to appreciate the impact that layoff policies have on long term corporate performance.
Consequently, descriptive statistics and sample distribution checks are generated for both samples, just like the correlations analyses between control variables and the relative multicollinearity assessments.

For what concerns specific analyses, hypotheses one and two assess changes in layoffs' size to variations in:

1) Whether the layoffs occur in the home or in a foreign country [dummy as independent variable for hypothesis 1];

2) The distance to which the layoff takes place [independent variable in hypotheses 2].

Noticeably, hypothesis two's independent variable assumes continuous and positive values that allow using 1-tailed tests of statistical significance instead of the 2-tailed ones as for all other tests.

Furthermore, while hypothesis one is tested for all three dimensions of size, hypothesis two utilizes only relative numbers of size as dependent variables. This because the *firm geographic dispersion* variable suffice in controlling for subsidiary distribution (hypothesis one), but cannot directly account for employment distribution as required by hypothesis two. Consequently, for hypothesis two the absolute value of size has limited descriptive value and that is why it is dropped from the analysis.

Hypotheses three and four have company performance as dependent variable, but its operationalization slightly differs between the two. For hypothesis three, performance entails the average company performance for the last three years of the sample (2006, 2007, 2008), while hypothesis four averages the layoff observations following three years.

Independent variables for hypotheses three are the size and frequency of layoffs in terms of percentage of abroad layoffs over total (per converse we can evict the *at home* percentage) for the 10 year investigation. The former considering the total numbers of employees involved, the latter the number of times layoffs occurred during the same period.

Finally, hypotheses four independent variables are layoff size, distance and a third parameter which is the combination of these two variables standardized.

In the end, all the variables are tested using linear regressions in light of the causal nature of the enquiries posed by the theoretical framework. The procedure utilized to test all hypotheses is the following.

At first, previously selected dummy variables are forced into the model along with the independent variable in order to control for specific observations effects (model 1). To complete the regression then the forward stepwise method of modelling is applied so to arrive to the largest explanatory power of the model.

4.7 Summary

This chapter presented the origin of the thesis and how it was organized, followed by the data collection techniques utilized. Subsequently, the measures, control variables and analysis techniques used to test the four hypotheses have been reviewed and specified.
Table 4.2 summarizes the main variables and data analysis techniques utilized in the hypotheses testing.

Table 4.2 Methods and key variables

Hypothesis	Analysis method	Dependent variable	Independent variable
1	Linear regression	Size of layoff	Dummy variable AT-HOME vs. ABROAD layoffs
2	Linear regression	Size of layoff	Distance
3	Linear regression	Post-layoffs company performance [average last 3 years]	Size and frequency of layoffs
4	Linear regression	Post-layoff company performance [average following 3 years]	Size of layoff , distance and a interaction term

The next chapter presents the results obtained from the data analysis.

Chapter 5 – Data analysis

5.1 Introduction

In the present chapter the results of the data analysis are presented.
The chapter is divided into two parts: the first one relates to hypotheses one and two, while the second part deals with the remaining third and fourth hypotheses. The choice of dividing the analysis presentation reflects the scheme used in presenting the theoretical framework and is also due to the fact that the paired hypotheses share the same considerations about control variables.
Next, descriptive statistics for the dependent variables are put forward.

5.2 Descriptive statistics and sample distribution

Descriptive statistics' tables are presented in appendix 5.1.
For the first two hypotheses with as dependent variable layoff size, the sample is composed by 205 layoffs observations, belonging to 36 multinational companies originating from two countries.
Graphic representations through histograms of all the variables show that the three dimensions of layoff size do not follow a normal distribution. In order to bring the variables back to a normal curve, the values of *Absolute value*, *Total share* and *Local share* are normalized through the use of their Log. Table A.5.1.2 presents the new values.

Hypotheses three and four, with corporate financial performance as dependent variable, have their descriptive statistics represented in table A.5.1.3. Judging from the histograms, no major distribution issues seem to affect the sample. Consequently, the reduced sample, as explained in the previous chapter, is composed by 182 layoff observations, belonging to 33 multinational companies coming from two countries.

After having illustrated the samples' statistics, the analysis will continue with the assessment of each hypothesis individually.

5.3 Hypothesis 1 and 2

5.3.1 Control variables

Before addressing the issues put forward by the theoretical framework in the shape of hypotheses, a selection of control variables was made.

As first order of business, a cross-check on the groups of firm, industry (1 digit), industry (2 digits) and year specific effect control variables was carried out in order to select the most value-carrying group of variables so as to save sufficient degrees of freedom for the later hypotheses testing.

The test proved that firms' differences carry more explanatory value compared to industry differences scoring higher in the adjusted R^2 values and being largely significant for all three dimensions of layoff size. Consequently, firm dummies were preferred over industry ones as to represent specific effects related to business differences.

However, of all the firm dummies accounted for, only few of them were significantly correlated with the dependent variables. Consequently, only those significantly correlated observations were maintained as control variables. (All results in appendix 5.2)

After the selection of specific firm dummies, the correlations between all control and dependent variables are studied as well as their multicollinearity. Selected correlations are presented in table 5.2 whilst complete tables are shown in appendix 5.3 and 5.4.

As expected, firm size and its natural logarithm measurement present a high correlation (Pearson correlation = 0.892**). Moreover their multicollinearity is pretty high, with the non-logarithmic measure exceeding the threshold of 10 as far as VIF score and being constantly larger than its logarithmic associate. Accordingly, the natural logarithm of *Firm size* is preferred over its absolute value.

The same procedure is used for performance measurements. ROA and ROE are highly correlated (Pearson correlation = 0.805**) and with a VIF score for ROE of above 182 for all three dimensions of size. ROA thus appear to be able to better capture the effect of performance on layoffs' dynamics.

Moreover, *State of the economy*, expressed as "home GDP growth" was significantly correlated (Pearson correlation = -0.713), but not strongly dependent (VIF score lower than 10) with the *geographic region effect* variable in all regressions. Such result was somewhat expected given that both variables allot to each observation a value that varies according to the country in which the company has its headquarters (Canada or Germany). Statistically, in this case "home GDP growth" is comparable to a dummy variable and since *geographic region effect* is already a "pure" dummy, the latter variable is preferable over the former. Moreover, theoretically, the *Geographic region effect* is accredited for representing a wider variety of differences elapsing between countries (not limited to economic ones) compared to the home GDP growth, confirming the statistical perspective on the matter.

The last considerations are reserved for the *state of the economy* variable. Because no important correlations are witnessed between its remaining three measurements, the choice of which operationalization to use in the regression is left to SPSS and postponed to the regression analyses.

Table 5.2 Correlations of control variables for three dimensions of layoff size

Layoff size:	***Absolute value***	***Total share***	***Local share***
Control variable	**Pearson correlation**	**Pearson correlation**	**Pearson correlation**
F.D. Agrium inc.	-.250**	-	-
F.D. CAE Inc.	-	.164*	-
F.D. Celestica Inc.	-	-	.227**
F.D. CHC helicopter corp.	-.151*	-	-
F.D. Quebecor Inc.	-	-	-.191**
F.D. Royal bank of Canada	-.266**	-.317**	-
F.D. Saputo Inc.	-.182**	-	-.139*
F.D. Sun Life Financial Inc.	-	.149*	-.172*
F.D. DaimlerChrysler AG	.240**	-	-
F.D. Deutsche Bank	.195**	-	-
F.D. Deutsche Telekom	.241**	-	-
F.D. Pixelpark AG	-.193**	.199**	.269**
F.D. Siemens	-	-.432**	-.152*
Geographic region effect	.347**	-.098	.119
Firm geographic dispersion	.197**	-.385**	-
Home GDP growth	-.278**	.088	.054
Target GDP growth	-.239**	-.113	.179*
Home OUTPUT GAP	-.041	.162*	.121
Target OUTPUT GAP	.081	.222**	-.033
Firms size	.340**	-.331**	-.094
LN (Firm size)	.254**	-.311**	-.160*
ROE	.183**	-.182**	-.266**
ROA	.104	-.096	-.175*

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed). a: N= 205

With this overview of all control variables and their statistical relationships, all possible (acknowledged) disturbing effects eternal to the linkages researched have been unveiled and controlled for. Consequently, the same considerations will not be replicated in the proceeding of the analysis.

5.3.2 Hypothesis 1

In order to assess where multinationals lay off prevalently, different models are applied. Each model has as dependent variable one of the three dimensions of layoff size: absolute value, total share and local share of layoffs.

5.3.2.1 DEPENDENT VARIABLE: ABSOLUTE VALUE OF LAYOFF

Appendix 5.5.1 shows the linear regression results. The best model for testing hypothesis one with layoff observations expressed in absolute value is the fourth, with an adjusted R^2 of 0.425. As can be drawn from table 5.3 however, the independent variable assumes a statistically significant negative β, which implies that, at least for layoffs expressed in absolute terms, multinationals downsize prevalently in their home country. Furthermore, much of the variance of the dependent variable is captured by the *state of the economy* in the target country.

Table 5.3 (Overview hp1) Regression results for layoff size in absolute value

Model 4	**Unstandard. β**	**t-value**
(intercept)	6.360	29.320***
Home/abroad layoff [*Indep. V.*]	- .452	-2.393*
Geographic region effect	.525	2.309*
Target GDP growth	- 20.252	- 3.485**
Target output gap	26.017	3.088**

5.3.2.2 DEPENDENT VARIABLE: RELATIVE NUMBER OF EMPLOYEES LAID OFF OVER TOTAL COMPANY EMPLOYEES

Appendix 5.5.2 shows the linear regression results. Again, also for layoff size relative to total company employees, Hypothesis 1 is rejected. The β of the independent variable is significant and negative. The best model yielded by SPSS is model three with an explanatory value (adjusted R^2) of 0.406. Table 5.4 summarizes the model omitting *Firm dummies*. Similarly to the absolute value of layoffs, much of the variance is captured by the *state of the economy* (in the target country) variables.

Table 5.4 (Overview hp1) Regression results for layoff size relative to total company employees

Model 3	**Unstandard. β**	**t-value**
(intercept)	- 4.125	- 21.949***
Home/abroad layoff [*Indep. V.*]	- .475	- 2.569*
Target output gap	16.966	2.194*
Target GDP growth	- 17.026	3.101**

5.3.2.3 DEPENDENT VARIABLE: RELATIVE NUMBER OF EMPLOYEES LAID OFF OVER LOCAL COMPANY EMPLOYEES

The third dimension of layoff size is represented in appendix 5.5.3 and selected outputs are replicated in table 5.5. When layoffs are measured as relative size of Local employees, it is possible to note a significant and positive relation with abroad occurrence. This translates in supporting evidences for the

claim outlined by hypothesis 1. The model adjusted R^2 however is weaker than the other two dimensions and reaches its highest value (0.276) in model 3.

Table 5.5 (Overview hp1)Regression results for layoff size relative to local share of employees

Model 3	**Unstandard. β**	**t-value**
(intercept)	- 3.797	- 17.749***
Home/abroad layoff [*Indep. V.*]	0.607	3.326**
Target GDP growth	14.520	2.602*
Geographic region effect	.407	2.022*

5.3.2.4 HYPOTHESIS 1 CONCLUSIONS

The results of the first hypothesis testing are ambiguous. Two (absolute number and total share) out of three dimensions of layoffs size reject the hypothesis, while only size of layoff relative to local employees supports it. In the discussion chapter I will try to give explanations for such contrasting results.

5.3.3 Hypothesis 2

The testing of hypotheses two is solved similarly to the previous hypothesis. Different models are applied according to the dimension of size in order to check whether and how they are affected by geographic distance. In this case though, only relative numbers of employees' layoffs are assessed. Appendix 5.6 presents the relative SPSS outputs.

5.3.3.1 DEPENDENT VARIABLE: RELATIVE NUMBER OF EMPLOYEES LAID OFF OVER TOTAL COMPANY EMPLOYEES

As can be drawn from table 5.6, *geographic distance* presents a negative and significant (at 0,5 percent level) relation with the relative size of layoff over total employees. Furthermore, the *State of the economy* in the target country is also significant and, as in the previous hypothesis, continues to absorb much of the variance of the dependent variable. The model adjusted R^2 is almost of 40 percent (0.383).

Table 5.6 (Overview hp2) Regression results for layoff size relative to total company employees

Model 2	**Unstandard. β**	**t-value**
(intercept)	- 4.337	- 26.141**
Geographic Distance [*Indep. V.*]	$-4.56\ E^{-5}$	- 1.705*
Target GDP growth	- 14.926	- 2.712**

5.3.3.2 DEPENDENT VARIABLE: RELATIVE NUMBER OF EMPLOYEES LAID OFF OVER LOCAL COMPANY EMPLOYEES

In terms of layoffs' size expressed as percentage of local employees, the relation with the independent variable is positive and significant. Significant are also the Geographic region effect and *Target* [country] *GDP growth* control variables. The model's explanatory power is 0.283 (adj. R^2).

Table 5.7 (Overview hp2) Regression results for layoff size relative to local share of employees

Model 2	**Unstandard. β**	**t-value**
(intercept)	- 3.705	- 18.408***
Geographic Distance [*Indep. V.*]	$9.63\ E^{-5}$	3.632***
Geographic region effect	.491	2.456**
Target GDP growth	13.649	2.448

5.3.3.3 HYPOTHESIS 2 CONCLUSIONS

Just like hypothesis one, hypothesis two regressions do not clearly support or confute their claim either. Although layoffs as percentage of the local company workforce has been demonstrated having a positive and significant relation with distance, the same conclusion cannot be extended to the percentage over total company employees, which also yielded a significant, but negative, result.
Last word is spent on control variables. Only the *geographic region effect* and *state of the economy* measurements were found significant, with the state of the economy cannibalizing large part of the variance in all models. On the other side, it is interesting to note that both *firm size* and *firm performance* failed to account for any dynamic in downsizing processes.

5.4 Hypotheses 3 and 4

5.4.1 Control variables

Just like it was done for the first pair of hypotheses, control variables are assessed at first.
A second cross-check between groups of dummy control variables confirm what found previously: Compared to industry dummies, firm dummies better represent the possible differences in performance owed to each company being unique. Hence, correlation tests were ran in order to identify those firm dummies significantly correlated with the dependent variables to be accounted for in the further analysis. Appendix 5.2 presents the relative SPSS outputs.

With all control variables defined, it was finally possible to investigate the correlations between all the variables composing the regressions.

As appendices 5.3.2 and 5.3.3 display, *state of the economy*, expressed as "home GDP growth" was once again significantly correlated (Pearson correlation = - 0.753) with the *geographic region effect* variable in several matrices. Accordingly, the same line of reasoning adopted in the first assessment applies here too, and the *geographic region effect* variable is preferred over the *home GDP growth* one.

No other correlation's issue was found and, in line with paragraph 5.3.1, considerations regarding the remaining dimensions of *State of the economy* are deferred to each linear regression.

5.4.2 Hypothesis 3

Hypothesis three compares the impact on company performance of abroad downsizing policies rather than at-home ones. In order to do so, hypothesis three is tested with all four dimensions of performance. The results are presented in appendix 5.7 and summarized in figure 5.8.

Table 5.8 Overview hypothesis 3 results

Average last 3 years	**Dependent variable**	**Size of abroad layoff over total layoffs**			**Amount of abroad layoff over total layoffs (Frequency)**		
		Adj. R^2	***F-value***	***B independent***	***Adj. R^2***	***F- value***	***β independent***
ROE		.885	156.147***	.017	.896	173.890***	.100***
Geographic region effect				*- .032***			*- .046****
ROA		.761	72.940***	- .002	.759	82.421***	.031
Geographic region effect				*.023**			*.022**
Target Output Gap				*- .845**			
1)Tobin's Q		.906	292.158***	- .356***	.903	280.647***	- .356**
2)Tobin's Q		.895	222.553***	- .193†	.897	226.340***	.364*

The first set of tests regarding the number of people laid off during the ten years shows that corporations enjoy market performance premiums when they lay off prevalently at home, in contrast with the expected outcome. Nonetheless, considering the number of times they lay off (frequency), it is difficult to draw similar conclusions because of contrasting betas.

Further investigation is required in order to solve the ambiguity of the result here obtained. In appendix 5.8 additional analysis is performed assessing performance with different time focuses.

5.4.2.1 HYPOTHESIS 3 CONCLUSIONS

The base analyses do not support hypothesis three when performances are assessed with long term scope and in junction with layoff size, whilst for layoff frequency inconclusive results are found.
Considering the additional analysis then, accounting measurements of performance are found to carry a positive and significant relation with abroad layoffs for all tests and for both short and mid term perspectives.
Finally, market measures in combination with layoff size remain negative and significant throughout the whole analysis, whilst, in conjunction with layoff frequency, inconclusive results are obtained.

In sum, the combination of tests supports hypothesis three when performance are assessed with accounting measures in a short to mid term perspective, but rejects it in the long run.
They also rejected the hypothesis for the market measure irrespective of the time focus in relation with the total size of the layoffs. Yet, inconclusive results are obtained when the Tobin's Q is assessed with layoffs' frequency.

5.4.3 Hypothesis 4

Hypothesis four's purpose is to address changes in performance in light of variations of layoff size and distance. In order to do so, performance is taken as dependent variable, while independent ones are size of layoff, geographical distance and an interaction term which is the result of the combination of the two variables standardized. To note, size is assessed for all three its dimensions.
Full outputs are presented in appendix 5.9.

5.4.3.1 DEPENDENT VARIABLE: ROE

All dimensions of size yield negative results for the interaction term, but none of them is also significant, preventing hypothesis four from being fully supported.
In terms of control variables, part of the variance of all three models is absorbed by *Target GDP growth*.
Table 5.9 summarizes the analysis without firm dummies.

Table 5.9 ROE post layoff average three years

Layoffs as	*Absolute number*		*Total share*		*Local share*	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(intercept)	.099	- 2.860*	.095	2.621**	.089	2.778*
Control variables						
TARGET gdp growth	- 3.522	- 3.115**	-3.395	-3.071**	-3.500	-3.090*
Main effect						
Size	$-3.46E^{-06}$	-.548	-.189	-.218	.111	- .848
Geo. Distance	$1.88E^{-05}$	3.581***	$1.85E^{-05}$	3.466*	$1.75E^{-05}$	3.035*
Standardized interaction term	- .001	- .032	- .002	- .095	- .011	- .724
Model R^2 (adj.)	.720 (.710)		.719 (.710)		.720 (.711)	
f-value	74.996 ***		74.752***		75.181***	

5.4.3.2 DEPENDENT VARIABLE: ROA

When performance is assessed with ROA, measures of layoff size unrelated to the company employment distribution present a negative but non-significant interaction term. On the other hand, when examining local share of layoffs, the *size*distance* variable assumes positive and significant values, which is in contrast with the hypothesis.

Again, *state of the economy* control variables are present in all models.

Table 5.10 ROA post layoff average three years

Layoffs as	*Absolute number*		*Total share*		*Local share*	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(intercept)	.027	- 2.368*	.030	2.527*	.006	.472
Control variables						
TARGET gdp growth	- 1.164	- 3.214*	- 1.208	- 3.399*		
HOME Output gap	- 1.783	-2.852***	- 1.710	- 2.744**	- 3.954	- 3.698**
Main effect						
Size	$-4.96E^{-07}$	.247	- .188	- .640**	- .330	-5.528***
Geo. Distance	$5.96E^{-06}$	3.515*	$5.44E^{-06}$	3.119**	$1.19E^{-05}$	3.712***
Standardized interaction term	- .00039	- .067	- .007	- 1.087	.024	3.063*
Model R^2 (adj.)	.788 (.777)		.789 (.778)		.329 (.306)	
f-value	70.953 ***		71.570 ***		14.323***	

5.4.3.3 DEPENDENT VARIABLE: TOBIN'S Q 1

Although layoffs' size in absolute terms has a positive *size*distance* interaction term, both relative measures tend to be characterized by negative values. Given that, none of these results is also statistically significant. *TARGET gdp growth* control variable instead is significant and with (relatively) high coefficient values for the latter models.

Table 5.12 Tobin's Q 1 post layoff average three years

Layoffs as	*Absolute number*		*Total share*		*Local share*	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(intercept)	1.621	45.252***	1.530	28.258***	1.532	32.041***
Control variables						
TARGET gdp growth			3.165	1.989*	3.829	2.368*
Main effect						
Size	- 1.54E^{-06}	- 1.735†	.336	.290	- .146	- .931
Geo. Distance	- 8.06E^{-06}	- 1.008	- 1.12E^{-05}	- 1.376	- 5.88E^{-06}	- .689***
Standardized interaction term	.015	.568	- .020	- .704	- .014	- .587
Model R^2 (adj.)	.842 (.835)		.844 (.835)		.845 (.837)	
f-value	115.369 ***		103.068 ***		104.480***	

5.4.3.4 DEPENDENT VARIABLE: TOBIN'S Q 2

All investigations for this version of the Tobin's Q confirm a negative relation between the interaction term and performance, but, once again, none of these results are also statistically significant.
Control variables are important in explaining the model's variance only for Local share, while for the remaining models, the influence is modest.

Table 5.13Tobin's Q 2 post layoff average three years

Layoffs as	*Absolute number*		*Total share*		*Local share*	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(intercept)	.940	19.924***	.953	18.697***	.861	13.431***
Control variables						
Geo region effect	- .282	- 4.303***	- .281	-4.528***	- .230	-3.601***
Target gdp growth					3.907	2.148*
Main effect						
Size	5.84E^{-07}	.002†	- .688	- .551	- .371	- 2.170*
Geo. Distance	- 1.73E^{-06}	- .195	- 3.91E^{-06}	- .440	5.29E^{-06}	.569
Standardized interaction term	- .007	- .245	- .047	- 1.530	- .004	- .173
Model R^2 (adj.)	.839 (.831)		.841 (.833)		.848 (.839)	
f-value	99.758 ***		101.378***		95.305***	

5.4.3.5 HYPOTHESIS 4 CONCLUSIONS

Overall, the interaction term *size*distance*, which should tell us about the effect that distance has on the relationship between layoff and performance, has not been found significant, except for the ROA measure of performance and Local share of Layoffs.

These statistically unsatisfying results do not allow to completely accept or reject the hypothesis. Consequently, conclusions and considerations on the issue will be argued in the final chapter.

5.5 Single-country analysis

In light of the pending hypotheses and their sometimes ambiguous results, the multi-country database has been divided according to the companies' home country in order to be able to perform the entire analysis for both newly generated single-country datasets. The presentation of the results and the comparison tables of all three different dataset are shown in appendix 5.10.

Hypothesis one finds confirmation of its original conclusions from the German dataset, while from the Canadian sample, no significant outcomes are witnessed.

Hypothesis two is the mirror image of hypothesis one, with the Canadian sample yielding similar results to the original analysis and the German one being non-significant in its findings.

Regarding hypothesis three, the conclusions drawn from the original results are basically the combination of the findings of the two single-country datasets.

Hypothesis four is probably the one that gains the most from this additional analysis. As a matter of fact, while the German dataset does not find any significant relation between distance and the layoff-performance dualism, for Canadian companies a negative and significant relationship is found when layoffs are measured relatively to total company workforce. Although it is not the definitive proof of validity of the hypothesis, it partially supports it and gives space for a series of considerations that I will postpone to the result discussion.

5.6 Summary

The following summary refers the conclusions of all the analyses performed, including hypothesis three additional analysis and single-country analyses.

Hypothesis one yields contrasting results. The hypothesis is supported when layoffs are measured relatively to the number of local employees, but it is not when considering the number of employees laid off or the relative quantity over total company employees.

Hypothesis two also is twofold. Layoffs expressed as percentage of local employees support the hypothesis' claim while total share of layoffs rejects it.

Hypothesis three is confirmed when performances are measured with accounting indexes, with a short to mid term perspective, and in the case of Germany, also in the long run. Conversely, the hypothesis is not

accepted for both market measures and long term performance irrespective of the index utilized when in combination with layoff size.

Ultimately, hypothesis 4 cannot be accepted due to lack in results' significance. However, partial support derives from the Canadian sample and the total share of layoff measure, which show a negative and significant relation with performance.

In the next chapter, economic valence and theory considerations will be attributed to the findings of the above presented data analysis.

For all tables from 5.3 to 5.13 : ***=0,001 significance(2-tailed**)**; **=0,01 significance(2-tailed**)**; *=0,05 significance(2-tailed**)**; †=0,1 significance (2-tailed**) ,**

Except tables 5.6 and 5.7 which applies : ***=0,001 significance(1-tailed**)**; **=0,01 significance(1-tailed**)**; *=0,05 significance(1-tailed**)**; †=0,1 significance (1-tailed**)**

Chapter 6 - Discussion and conclusion

6.1 Introduction

This final chapter contextualizes the findings of the analysis in their theoretical framework. Subsequently the limitations of the study are acknowledged while contributions and recommendations for future analysis conclude the chapter and the thesis.

6.2 Discussion

In this section, a conclusion regarding the theoretical implications of the data analysis findings will be presented with the purpose of answering the original research questions and ultimately, the problem statement.

The first hypothesis argues that companies are tempted to accept favourable working conditions granted by external governmental interventions, in exchange for [small] sacrifices in the optimal layoffs implementation strategies. Specifically, multinationals are more likely to layoff outside the home-country boards, even if [allegedly] less effective (Landier et al., 2007), in order to enjoy special concessions allotted by national institutions to *out-of-state* downsizers.

Although measures of size relative to the total company workforce reject the hypothesis, empirical support is warranted by layoff size relative to local number of employees. These contrasting results can be explained by considerations regarding company employment distribution. In absolute terms, multinationals downsize the most in the home country, due to the fact that normally the majority of people are employed in the country of origin. However, on percentage, foreign subsidiaries are the ones most at risk of closing or at least of employees' decimation. In this perspective, the French industry minister was not alone in his crusade against factories' closing in the home country, as a matter of fact, on percentage, large downsizing efforts are more likely in foreign subsidiaries than in the home-country.

Complementary to the rational perspective, but opposite in its reasoning, the non-rational approach argues that downsizing decision making cannot abstract from the emotional factors that may interfere during the decisional process. Accordingly, executives may prefer to lay off in distant subsidiaries because of the "social threat" that close by layoffs can cause. Distance is accredited to mitigate the managers' feelings of guilt and responsibility for implementing layoffs and, in this perspective, it is legitimate to expect that the more the distance, the larger the size of layoffs.

Not surprisingly, the results of this second hypothesis resemble those of the first one. Size of layoffs measured relatively to total company employees reject the hypothesis while relatively to local employment levels, the proposed relation between distance and layoff size is verified. Still, employment distribution concerns are also valid and demonstrate that, in proportion, far away subsidiaries are the ones that experience layoffs the most.

The outcome could also be explained by mean of other reasons: higher costs due to higher wage levels, poorer performance of distant divisions compared to closer ones, or also in light of the importance of the division for the firm. Nonetheless, prior studies have already presented wage level as not necessarily influencing the layoff location (Longenecker, 2004; Bloch, 1998), and poor performance or division importance have been demonstrated also of limited value (Landier et al., 2007).

After answering the first research question, that is, how companies behave in layoff decision making, the research continues investigating what are the effects that the two perspectives have on company performance.

The third hypothesis postulates that the financial performance of multinationals which downsize prevalently at home is expected to be lower than companies which downsized prevalently abroad, in light of the extra financial resources that abroad downsizers may receive from state institutions when avoiding at-home layoffs.

The results of the original analysis were not satisfactory in testing the hypothesis and additional analysis was required. In the supplementary analysis a combination of time focuses has been provided, assessing performance from short to long term. Moreover, since for governments and firms the number of people dismissed is more meaningful and relevant compared to the number of times layoffs are implemented, the frequency of layoffs assumes a marginal role and its results should be read as supplementary to the layoffs' size results.

The first conclusion that emerges from the analysis is that market measures do not respond positively to abroad layoffs, irrespective of the time focus investigated. This is in line with the findings of previous studies (Bowman at al., 1999; Worrel et al. 1991, Landier et al., 2007) which have demonstrated that stock markets appreciate downsizing efforts when they occur close to the headquarters because they can learn more about the firm objectives (willingness to restructure) and about the friendliness of the management towards shareholders (Landier et al., 2007).

Furthermore, in contrast with many previous studies which could not find any link between downsizing and performance (Mentzer, 1996 and Cascio, 1998) or found a long term positive relationship (De Meuse et al., 2004), here accounting measures of performance proved to be linked to downsizing and specifically, a positive relationship between abroad layoffs and company short and mid term future performance has been witnessed. This contrasting result supports the theory proposed to the extent that

other factors, namely, external state interventions, must be responsible for the improved company performance right after implementing layoffs. In the long run however, the performance of the two groups undergo a general levelling which can be explained by the extinction of the favourable condition granted by the aids to abroad downsizers and by the fulfilment of the restructuring process through targeted layoff and cost cuts of the home ones.

Again, many factors could be responsible for the outcome, starting from the fact that abroad layoff may reduce costs and expenses and allow the company to focus more on highly controllable at-home facilities, but, thus far, mere employees' layoffs have been tagged for being, at least in the short run, detrimental for company returns (Iqbal et al., 1995) giving additional support for this study's theory.

Finally, in light of the blurring effect that emotions have on the corporate decision making process, hypothesis four sees distance as a moderator of the [positive] relation between layoffs and corporate performance.

The results for this last hypothesis are disappointing. From the original analysis, only in one case distance was able to influence the layoff-performance relationship, but its effect was enhancing performance, instead of moderating them as expected. Considering only Canadian companies instead, the layoff measurement relative to total company employees give support to the hypothesis for three measures of performance of the four proposed. Even though this single-country assessment result is tempting in answering favourably to the hypothesis, such result is too limited to allow specific conclusions.

Notwithstanding, a distinctive trait between the two countries can be distinguished. In fact, the *psychological contract theory* supplies an interesting explanation for the discrepancy between Canada and Germany. First of all it is important to remember that North American countries, among which Canada, are profoundly different in terms of employees' dismissal protection compared to Germany. If in the latter country protection is granted towards all employees, in the former ones, employment can be terminated by either party with or without cause at any time (Gerlach, Levine, Stephan, and Struck, 2007). This scarcity of protection against dismissal may induce North American workers to see layoffs in distant subsidiaries as a warning bell of the willingness of the corporation to reorganize, thus fearing the eventuality of losing their job too. They may perceive the layoffs as a violation of their tacit contract with the company, which ultimately may translate in the decline of their job performance and consequently of the entire company's performance.

In contrast, German workers, strong by protection against sudden job terminations, will not associate far away layoffs with threats to their jobs, and consequently no negative repercussions on their productivity and on company performance may be expected, which would explain the difference in results between Canada and Germany.

In the end, a last joint comment on the two performance hypotheses' results can be put forward. The combination of hypothesis three's additional analysis with the lack of significance found for hypothesis four seems to enhance the validity of the findings of the external state intervention hypothesis. If abroad layoffs are able to improve company performance, but distance does not have a particular effect on the layoff-performance relation, then the cause for downsizing abroad may reside in those incentives, whilst emotional concerns follow only in a second stage of the decision process.

In any case, these results and conclusions should not be overlooked and they suggest that the approach deserves attention and further scrutiny. Liberally quoting De Meuse et al. in their 2004 article, perhaps the most appropriate conclusion that can be drawn from this study is that corporate performance after downsizing appears to be somewhat related to where layoffs occur.

6.3 Limitations

The study contains several limitations. The most relevant one is probably the lack of distinction between companies that enjoyed external aid and those that did not. Such information regarding large multinational companies are readily available since the crash of the global economy in 2007, but prior to that, only major firm-government negotiations would find media attention while local facility conciliations would pass unseen. Moreover, governments' interventions are rarely single-time injections of capital, rather, they are measures spread over an extended period of time, making it very difficult to attribute a downsizing campaign or any effect on future performance to one particular intervention. Consequently, the method used to investigate such theory is reversed; it started from acknowledging the effects that state-intervention may cause, then separating other confounding effects as presented in paragraph 2.4.1 and subsequently drawing conclusions on the testing results.
However, being able to study the data on who enjoyed of the aids and who did not would have allowed a series of additional considerations; starting from the effects and the extent of the benefits owed to governmental interventions; it could have also allowed to better read and interpret market reactions to corporate restructuring plans and possibly, it could have unveiled specific differences between industries, markets and countries.

Other limitations are related to the sample size. More layoffs' evidences from more companies, also not strictly multinationals corporations, would have increased the generalizability of the findings and it also might have helped in clarifying the sometimes ambiguous results obtained.

Observation issues are also a threat to the validity of the findings. First of all it is assumed that once layoffs are announced they will actually occur. Although the assumption is empirically confirmed by De Meuse et al.'s (2004) study, evidences for the layoffs actually taking place would grant superior reliability of the data.
Furthermore, not all observations are measured in the same way. In fact, certain observations refer to macro-areas and not to single countries, therefore the distance associated is not as accurate because of the impossibility of taking the capital city of a single country as point of reference.

Statistically then the panel construction of the database (observation vary for time and for company) would ultimately require Panel data analysis. In particular, hypothesis one and three would be best assessed with panel analysis using time as independent variable. However, due to the ease and reliability of the tool, linear regression analysis is considered as a valid and satisfactory substitute.

6.4 Management recommendations and theoretical contribution

In terms of managerial implications, we have seen how markets respond pessimistically to abroad layoffs despite the fact that accounting indexes support the effectiveness of the management manoeuvre. This may be due to two adding effects. First, abroad layoffs send negative messages about the shareholder friendliness of the management (Landier et al., 2007). Secondly, the interference of external aids in corporate decisions may warn shareholders of the state of distress that the company is experiencing and the actual ability and strength of the management of "pulling off" the company from it.
Therefore it is advisable to consider very carefully the necessity of recurring to such aids. They should be seen as the last resource before bankruptcy. All corporate restructuring activities and less invasive financial retrieving measures should be considered first by the management.

Although the effects of distance on the layoff-performance relationship are not supported by empirical evidences, the study has demonstrated that distance is related with the downsizing implementation strategies. Emotions are thus part of the decision making process of managers and the risk of implementing a wrong or biased choice is always behind the corner. Managers should be aware of the fact and when taking delicate decisions, should try to abstract from their community position for the well-being of all firm's stakeholders. A further measure that could be taken is to replace the often mono-country management boards with members with different origin and backgrounds so to have heterogeneous boards' members who seek the best for the company without concerns for the external community.

On the theoretical side, this study contribution is twofold.

First of all this study investigates the effects of subsidiaries' distance in the downsizing implementation strategies of large international firms and its effect on corporate performance. To my record such aspect of downsizing has never been researched before. Many studies, as presented in the literature review, propose causes of layoffs as determinant for future performance, forgetting that the implementation of such large scale measures may be as, or even more, important than the reasons that triggered them.

Furthermore this research is bold and ambitious in proposing new and unexplored explanations for layoff decision making. If emotions are still largely absent in economic models (Van de Laar et al., 2006), government responsibility in corporate decision making theory is something that has never been researched before, at least on the corporate side.

6.5 Future research

Because of the novelty of the object of research and of the theory underlying it, this study offers a good starting point for researches in multiple fields.

Since the study provides additional support for emotional elements playing a key role in decision making theories, further research on the field should not leave emotions unexplored.

Also government interventions have demonstrated their relevance in the field. A particularly valuable investigation would be comparing the downsizing strategies and the subsequent effects on performance of companies which enjoyed of external aids and those who did not.

Moreover a pecking order in the choices of where to lay off may shed further light on the matter of firms downsizing dynamics, disclosing whether there is a "rank" in the choices of where to dismiss employees.

The addiction of a third country, as originally presupposed, would also increase dramatically the overall value of the study, especially if assessing countries from less developed areas or from a totally different business environment. Enlarging the sample size with more observations from more countries may also allow to compare results and discover different dynamics in corporate decision making.

Operationally, the introduction of alternative market measures, like Sharpe or Treynor measures (Rowe, and Morrow, 1999), to record changes in stockholders' expectations and responses to layoffs would increase the value and the validity of the findings.

Other dimensions of distance, for example psychic distance, may arrive to different conclusions which can be compared to those here obtained.

Still the same operationalization of (geographic) distance could be used as determinant for other researches in internationally networked companies.

Finally, not all the questions posed by the study have been satisfactorily answered. Therefore, correcting and integrating the sample with the proposed data would also prove great value and enhance the external validity of the findings.

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Appendix Chapter 3

Appendix 3.1 Previous researches on the layoff-performance relation

Tables A.3.1, A.3.2 and A.3.3 below present the most important findings, conclusions and contributions of selected articles regarding the relation between layoff and subsequent performance. They are divided accordingly to whether they find a negative, null or positive relation between the two.

Table A.3.1 Negative relation between layoff and performance

Author	Year	Article	Main points
Worrel D.L., Davidson W.L. and Sharma V.M.	1991	Layoff Announcements and Stockholders Wealth	- There is a small negative reaction of shareholder returns in response to layoff announcements. - Market reactions are more pronounced for financially distressed firms than for non-distressed. Possibly because layoff announcement by troubled firms without any accompanying strategic announcement signal the presence of un-addressed problems that may hamper future earnings. - Unless accompanied by a broader strategic redirection of the firm, layoffs tend to be badly received by shareholders. When companies announce layoffs as part of more general strategic changes, company shares rise on average by 4 %, when announce layoffs alone, share prices fall by 6 %.
Iqbal Z. and Shekhar S.	1995	Layoffs, Stock Price, and the Financial Condition of the Firm	FINANCIAL MEASURES: - On average, shareholders react negatively to layoff announcements. - There are positive stock markets reactions to layoffs for financially weak firms as opposed to negative reactions for financially healthy firms. ACCOUNTING MEASURES: - They found evidences of a decline in earnings after layoffs.
Bowman E.H., Singh H., Useem M. and Bhadury R.	1999	When Does Restructuring Improve Performance?	- The article compares Portfolio, Financial and Organizational restructuring: Of all three types of restructuring, financial restructuring improves performance the most. Organizational restructuring the least. - Organizational restructuring does not have a significant impact on performance. - It appears that layoffs unaccompanied by other organizational changes tend to have a negative impact on performance.

Table A.3.2 No relation between layoff and performance

Mentzer M.S.	1996	Corporate Downsizing and Profitability in Canada	- Three competing models of downsizing: ▪ Rational or economic: is based on the highest levels of managerial rationality and concreteness of action and it is built on the assumption that downsizing is a managerial response to decreased profitability. - a corporation's poor economic performance IS associated with later downsizing and downsizing IS associated with a consequent improvement in performance. ▪ Asymmetric/Hysteretic: involves postponing the downsizing decision because senior management fails to objectively evaluate what is happening in the organization. - a corporation's poor economic performance IS NOT associated with later downsizing, but corporate downsizing IS associated with a consequent improvement in performance. ▪ Institutional: organizations' leaders facing high uncertainty will seek to reduce uncertainty by blindingly copying other, more visible organizations. - a corporation's poor economic performance IS NOT associated with later downsizing and downsizing IS NOT associated with a consequent improvement in performance. CONCLUSIONS: - No relationship between Layoff and Performance. - No support for either one of these approaches. Accordingly, managerial behaviour may reflect a mixture of these three models, and none of them prevails over the others.
Cascio W.F.	1998	Corporate Downsizing and Profitability in Canada	- Financial performances during the pre-downsizing period are unrelated to the magnitude and frequency of the following downsizing. - Corporate performance following downsizing are not significantly affected by the downsizing.

Table A.3.3 Positive relation between layoff and performance

Brickley J.A. and Van Drunen L.D.	1990	Internal corporate Restructuring: An Empirical Analysis	FINANCIAL MEASURES: - Averagely, stock markets respond positively to organizational restructuring announcements, but with small movements (less than one percent) - The size of the movement is contingent upon the rational underlying it and the type of organizational change proposed. - The impact of the company's layoff announcement on its share price is greater when the WSJ provides lengthier coverage (more information have greater impact on shareholders reactions). - Companies that have been under the shadow of hostile acquisition during the year prior to the restructuring see greater improvement in their shareholder wealth in the wake of the announcement. ACCOUNTING MEASURES: - Earnings performance is not improved in the years immediately after the restructuring. - These controversial results because investors anticipate long-term improvements in earnings from organizational restructuring, but the resulting changes may necessitate short-term expenses to achieve them.
De Meuse K.P., Bergmann T.J, Vanderheiden P.A. and Roraff C.E.	2004	New Evidences Regarding Organizations Downsizing and Firm's Financial Performance: A long-term Analysis	-Financial performances of companies that downsized are not significantly different than those who did not. -Data show that companies that downsized were significantly under-performing the firms which did not downsize in the year of the announcement and in each of the two subsequent years. However, after three years and for the remaining years, the firms that had laid off were no longer under-performing their counterparts. -*Amount*: Firms announcing ten percent layoffs, or more, significantly under-perform those organizations announcing relatively fewer numbers of employees' layoffs. -*Frequency*: Partial support for the hypothesis that the financial performance of companies which downsized three or more times is consistently lower than those companies that downsized less often. *Note:* This is the only study of all presented that considered an extend time frame of twelve years.

Appendices Chapter 4

Appendix 4.1 About Canada

The choice of taking Canadian corporations as object of the sample is due to the country's peculiar positioning in terms of economical and juridical systems. In fact, Canada resembles the United States for its market-oriented economic system and pattern of production, whereas its law system presents similarities with those of the continental Europe countries.

Economically, after World War II Canada developed tight commercial relations with its neighbour country and, as a consequence, it grew its international competitiveness along a similar path.
Many ad-hoc trade agreements were arranged between Canada and the US since the 1960s, which led, in 1988, to the signing of the Free Trade Agreement (FTA), later extended also to Mexico (becoming the North American Free Trade Agreement or NAFTA), with the purpose of eliminating tariffs and barriers to the exchange of people, goods and investments between the three north American countries (from: canadainternational.gc.ca). These trade policies led the United States to be in a dominant position in Canada's trade statistics: in fact, around four-fifths of Canada's exports and three-quarters of its imports belong to the USA (from: statcan.gc.ca)
Canada's main economic sector is the services industry, which employs over seventy-five percent of the country's total labour force and accounts for two thirds of the nation's GDP (from*:* cia.gov). Furthermore, contrarily to most of the other highly industrialized nations, it has a very strong primary sector, and it is distinguished for being world leader in mining for natural resources (gold, uranium and others).

For what concerns its law system, Canada is a federation of provinces and territories organized under a constitutional monarchy with a parliamentary system of government.
The Common law system [heritage of the British colonialism] is the prevailing legal system adopted in all regions of Canada, except for Québec, where Civil law prevails. The presence of the Civil law system in Québec is owed to the French domination of the region until the 18th century which brought what in the years became the Civil Code of Québec (Tetley, 1999). The Code covers matters of private law such as the status of individuals, relations within families, property rights, wills, contracts, partnerships, and claims but it is separated from public and criminal laws, and, similar to the common law system, is subject to the Constitution of Canada (from: justice.gc.ca).
This mixed juridical system bridges the liberal and market-oriented attitude typical of Anglo-Saxon countries with a more "socially oriented" attention common in continental Europe countries. Such "bijuralism" and bilingualism [as much as there are two legal systems, there are also two recognized

languages, English and French] however, has not hampered the economic development and international competitiveness of Canada, which can be considered the most European of the North American countries.

Appendix 4.2 Company performance indexes

This appendix presents the accounting and financial indexes considered in order to value the performance of the companies object of the research. Table A.4.2 classifies the indexes, their formulas and give a brief description of each index in terms of measuring efficacy and the performance dimension associated to it. Finally a disambiguation of the financial index (Tobin's Q) is supplied.

Table A.4.2 Company performance indexes

Index	Formula	Description
ACCOUNTING INDEX		
Return on Equity (ROE)	$\frac{\text{Net income}}{\text{Stockholders' Equity}}$	It represents the firm's efficiency in generating returns for each unit of capital invested in the firm by its stockholders. As De Meuse et al. (2004) noticed, "ROE is the best measure in terms of determining whether the layoffs helped achieve the primary purpose of the company [improve the financial rate of returns of its owners]." (De Meuse et al., 2004: 164)
Return on Assets (ROA)	$\frac{\text{Net income}}{\text{Total assets at year end}}$	It corresponds to the profitability of a company investment and indicates how efficiently the money invested is utilized.
Return on Investments (ROI)	$\frac{\text{EBIT}}{\text{Net investments}}$	It measures the efficiency of the firm's ordinary operations in generating value irrespective of the sources of capital. In other words, it represents the return generated by the capital invested in the firm.
FINANCIAL INDEX		
Market-to-book Ratio (Tobin's Q)	Two different operationalization are proposed:	It is defined as the ratio of the market value of a firm to the replacement cost of its assets, and it reflects the investors' perceptions on possible future performance of the firm.
• Tobin's Q 1	$\frac{\text{[(Book value of assets + market value of common stocks) – Total book value of common stocks – Balance sheet differed taxes]}}{\text{Book value of assets}}$	(Bebchuk, and Cohen, 2005)
• Tobin's Q 2	$\frac{\text{(Market value of equity + Liquidating value of the outstanding preferred stocks + Net debt position)}}{\text{Book value of total assets}}$	(Chung, and Pruitt, 1994)

Due to the undisputable influence that the Tobin's Q has over many aspects of corporate decision making, two different operationalizations of the index are proposed.

The first definition can be ascribed to the classical formulation of the index, which however is characterized by numerous and difficult-to-retrieve addends. This makes the formulation not as quickly determinable as other market performance measures (the beta, for example), limiting its practical applicability.

With option two, Chung and Pruitt (1994) have proposed a more "manager-friendly", easy and fast-to-measure approximation of the Tobin's Q which should be more appealing to managers and practitioners. In the mind of the author, assessing both measures should allow investigating multiple points of view (the theorists' and the practitioners') about the impact that layoffs and distance have on corporate performance; not only in terms of accounting measures, but also as market measures.

Appendix 4.3 Control variables

This appendix contains the description of each control variable assessed in the data analysis. In order to supply the reader with a clear and comprehensive picture of all the control variables, their operationalization and the hypotheses controlled for, the same table (Table 4.2) of chapter four is here replicated.

Table 4.1 Control variables

Control variable	Operationalization	Hypotheses controlled
Firm size (Total assets)	The firm's total assets	1; 2
Firm size (LN(Tot assets)	The natural logarithm of the firm's total assets	1; 2
Firm performance (ROE)	Net income divided by shareholder equity	1; 2
Firm performance (ROA)	Net income divided by total assets	1; 2
Firm performance (ROI)	EBIT divided by net investments	1; 2
State of the economy (GDP growth)	Annual percentage growth rate of GDP at market prices based on constant local currency. Estimated both for the home country and for the country where the layoff occurs	1; 2; 3; 4
State of the economy (Output gap)	The difference between actual and potential GDP as percentage of potential GDP. Estimated both for the home country and for the country where the layoff occurs	1; 2; 3; 4
Industry specific effect (1 digit)	Dummy variables associated to differences in the first digit of industrial SIC codes	1; 2; 3; 4
Industry specific effect (2 digits)	Dummy variables associated to differences in the first 2 digits of industrial SIC codes	1; 2; 3; 4
Firm specific effect	Dummy variables associated to the firms	1; 2; 3; 4
Year specific effect	Dummy variables associated to each of the ten-year window	1; 2
Geographic region effect	Dummy variable associated to the region of the firm's headquarter settlement (Europe vs. North America)	1; 2; 3; 4
Firm geographic dispersion	Number of countries in which the firm operates	1

Firm size is widely recognised as control variable. For example Budros (1999) cites *Firm size* as responsible for variations in companies' downsizing rates. *Firm size* can be considered either in terms of Total Assets or as their natural logarithm. Both measurements, though, are worth accounting for only for hypotheses number one and two, which relate specifically to downsizing efforts.

Firm performance is one of the main factors affecting layoff decision making. As a matter of fact, to decline in performance, managers respond by limiting expenses and cutting costs; and as we saw in chapter two, corporate downsizing is one of the fastest and most efficient ways (at least in the short term) to trim costs. Common measures of performance are ROE and ROA, which are capable of well representing the economic situation of a company. Also ROI can function as indicator of the ability of a firm to repay its investments.

Accordingly, hypotheses 1 and 2 will incorporate *firm performance* in the statistical analysis.

State of the economy is undoubtedly a key factor in the life of a company. The fact that the level of unemployment rises during recessions and decreases during economic expansion is diffused knowledge among researchers (Nickell, Nunziata, and Ochel, 2005). Consequently, if we seek valid results for the investigation, we cannot pass over on the state of the economy control variable. GDP growth and OUTPUT GAP are both of use for the cause. Because of its influence on downsizing polices and also on the levels of companies' future performance the variable is worth to be controlled for for all hypotheses with attention to the home as well as to the target country.

The *Industry specific effect* variable rises from the necessity of considering differences owed to the companies' appurtenance to different sectors and industries. For example it can be that some industries are more regulated then others or that they undergo cyclical variation in employment levels. The companies' classification is made recurring to the Standard Industrial Classification System, which allows for several levels of refinement. For the purpose of the study, only the first and second digits are considered. Finally, the variable is controlled for in all four hypotheses.

Similar arguments are valid for another control variable: *Firm specific effects*. In particular, it relies on the intrinsic diversity among firms and their uniqueness. Accordingly, just like industry controls, dummy variables per each firm are created and controlled for to test all the hypotheses.

Year specific effect controls for possible variations in corporate polices or any other effect owed to external and temporal modifications of the competitive environment. Because of the construction of hypotheses three and four, which allows discerning the observations from temporal concerns, only hypotheses one and two need this control variable.

Geographic region effect relates to the fact that the multinational companies selected for the sample belong to different regions (North America and Europe) and this may create differences in their approach to layoffs. It can be considered as a sort of simplification of the psychic distance measurements, incorporating in the variable an undetermined number of factors all related to differences in provenance. Also performance may be affected by such measure since the differences in continental economic situations are included in the aforesaid variable. As a result, the g*eographic region effects* are computed allotting a dummy variable to each region of origin of the multinationals under observation, and all four hypotheses are tested accounting for these possible differences.

Firm geographic dispersion seeks to weight the geographical dispersion of companies in terms of subsidiaries diffusion (Gao, Ng, and Wang, 2008). That is, it measures the number of countries where a firm has its presence and it applies to the testing of hypothesis one. Furthermore, local share of layoff does not need to be controlled for by this variable, since it incorporates already the relative number of workers employed in the country.

Appendices Chapter 5

Appendix 5.1 Descriptive statistics and sample distribution

This appendix contains the descriptive statistics' tables for both datasets. Table A.5.1.1 and A.5.1.2 refer to the complete dataset as for testing hypotheses one and two. Table A.5.1.3 portrays the *partial* dataset as required for testing hypotheses three and four.

Table A.5.1.1 Descriptive Statistics HP 1-2

	N	Minimum	Maximum	Mean	Std.
	statistic	statistic	statistic	statistic	statistic
N. of employees laid off	205	3	37.000	1.140,22	3.205,815
Total Share of layoffs	205	0,0001	0,1851	0,01591	0,0232586
Local Share of layoffs	205	0,0007	1,0000	0,13244	0,2227969
dummy home-abroad layoff	205	0	1	0,66	0,475
Geographic Distance	205	0	16.273	2.456,92	3.246,926
ROE t	205	-17,557	0,377	-0,561	2,827
ROA t	205	-1,217	0,190	-0,051	0,267
FS t-1	205	0,501	13,875	10,043	2,160
FS (LN) t-1	205	-0,690	2,630	2,275	0,300
TARGET gdp growth	205	-0,004	0,082	0,023	0,016
HOME gdp growth	205	-0,002	0,055	0,019	0,015
TARGET output gap	205	-0,052	0,031	0,001	0,011
HOME output gap	205	-0,013	0,028	0,003	0,010
Firm geographic dispersion	205	2	220	48,73	55,548
Valid N (listwise)	205				

Table A.5.1.2 Descriptive Statistics HP 1-2 logarithm

	N	Minimum	Maximum	Mean	Std.
	statistic	statistic	statistic	statistic	statistic
(Log) N. of employees laid off	205	1,10	10,52	5,7067	1,59805
(Log) Total Share of layoffs	205	-9,81	-1,69	-5,0178	1,51679
(log) Local Share of layoffs	205	-7,30	0,00	-2,9648	1,39169
dummy home-abroad layoff	205	0	1	0,66	0,475
Geographic Distance	205	0	16.273	2.456,92	3.246,926
ROE t	205	-17,557	0,377	-0,561	2,827
ROA t	205	-1,217	0,190	-0,051	0,267
FS t-1	205	0,501	13,875	10,043	2,160
FS (LN) t-1	205	-0,667	2,622	2,275	0,304
TARGET gdp growth	205	-0,004	0,082	0,023	0,016
HOME gdp growth	205	-0,002	0,055	0,019	0,015
TARGET output gap	205	-0,052	0,031	0,001	0,011
HOME output gap	205	-0,013	0,028	0,003	0,010
Firm geographic dispersion	205	2	220	48,73	55,548
Valid N (listwise)	205				

Table A.5.1.3 Descriptive Statistics HP 3-4

	N	Minimum	Maximum	Mean	Std.
	statistic	statistic	statistic	statistic	statistic
ROE LAST 3	182	-0,342	0,699	0,117	0,189
ROA LAST 3	182	-0,237	0,826	0,001	0,108
1)TOBIN'S Q last 3	182	0,866	9,198	1,525	0,915
2)TOBIN'S Q last 3	182	0,093	8,864	0,812	0,991
ROE t+1	182	-4,710	0,652	-0,144	0,777
ROA t+1	182	-1,466	0,780	-0,044	0,284
1) T'S Q t+1	182	0,821	8,630	1,535	0,802
2) T'S Q t+1	182	0,064	8,319	0,860	0,901
ROE postL average 3	182	-1,880	0,664	-0,067	0,427
ROA postL average 3	182	-0,699	0,791	-0,013	0,154
1) T'S Q postL average 3	182	0,849	9,198	1,541	0,823
2) T'S Q postL average 3	182	0,099	8,864	0,854	0,897
ABROAD / TOT layoff	182	0,000	1,000	0,461	0,293
frq ABROAD/TOT	182	0,000	1,000	0,604	0,231
x year ABROAD / TOT layoff	182	0,000	1,000	0,488	0,373
year frq ABROAD/TOT	182	0,000	1,000	0,604	0,328
N. of employees laid off	182	3	37.000	1.164	3.346
Total Share of layoffs	182	0,000	0,185	0,016	0,023
Local Share of layoffs	182	0,001	1,000	0,131	0,220
TARGET gdp growth	182	-0,004	0,082	0,023	0,016
HOME gdp growth	182	-0,002	0,055	0,019	0,016
TARGET output gap	182	-0,052	0,021	-0,001	0,010
HOME output gap	182	-0,013	0,021	0,001	0,009
Valid N (listwise)	182				

Appendix 5.2 Preliminary analysis dummy control variables

This appendix contains the preliminary studies on dummy control variables. Each section presents first a table (*'cross-check on grouped dummy control variable'*) summarizing the R^2, the adjusted R^2 and the statistical significance for each group of dummy variables in order to select the most value-carrying group of variables. After the selection, correlation matrix between the single dummies and the dependent variables are shown.

Appendix 5.2.1 DUMMY CONTROL VARIABLES HYPOTHESES 1 AND 2

Table A.5.2.1.1 Cross-check on grouped dummy control variables hypotheses 1 and 2

Control variable	***R^2***	***Adj. R^2***	***F- value***
• *Absolute number of layoffs (log)*			
Firm specific effect	0,491	0,386	4,664***
Industry specific effect (2 digits)	0,183	0,113	2,627***
Industry specific effect (1 digit)	0,082	0,054	2,935**
Year specific effect	0,040	-0,005	0,898
• *Total share of layoffs (log)*			
Firm specific effect	0.430	0,312	3.647***
Industry specific effect (2 digits)	0.194	0.126	2.831***
Industry specific effect (1 digit)	0.067	0.039	2.379*
Year specific effect	0.054	- 0.011	1.241
• *Local share of layoff (log)*			
Firm specific effect	0.351	0.217	2.617***
Industry specific effect (2 digits)	0.158	0.087	2.207**
Industry specific effect (1 digit)	0.080	0.052	2.853*
Year specific effect	0.075	0.032	1.752†

LEGENDA:

***. Correlation is significant at the 0.001 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

†. Correlation is significant at the 0.1 level (2-tailed).

Table A.5.2.1.2 Firm specific effect correlation matrix for hypotheses 1 and 2

		logAbsolute	logTotal	logLocal	F.D. Agrium inc.	F.D. ATS Automation Tooling Systems Inc	F.D.Bombardier Inc.	F.D.CAE Inc.	F.D. Celstica Inc.	F.D. CHC helicopter corp.	F.D. Dorel Industries Inc.	F.D. Magna International Inc.	F.D. Manulife finance co.	F.D. Nortel networks corp.	F.D. Nova Chemicals Corp.	F.D. Quebecor inc.	F.D.Royal Bank of Canada	F.D. Saputo Inc.	F.D. Sun Life Financial Inc.
logAbsolute	Pearson Correlation	1	0.576	0.195	-0.250	-0.102	0.067	-0.107	0.040	-0.151	.(a)	0.100	-0.071	0.033	-0.130	-0.033	-0.266	-0.182	0.065
	Sig. (2-tailed)		0.000	0.005	0.000	0.144	0.337	0.128	0.566	0.030	.	0.155	0.313	0.640	0.063	0.643	0.000	0.009	0.358
logTotal	Pearson Correlation		1	0.368	0.070	0.053	0.012	0.164	0.076	0.069	.(a)	0.038	-0.045	0.023	0.017	-0.047	-0.317	0.106	0.149
	Sig. (2-tailed)			0.000	0.317	0.447	0.868	0.019	0.276	0.325	.	0.591	0.521	0.746	0.804	0.501	0.000	0.131	0.033
logLocal	Pearson Correlation			1	-0.076	-0.037	-0.005	0.040	0.227	0.037	.(a)	-0.062	-0.062	-0.032	0.024	-0.191	0.006	-0.139	0.172
	Sig. (2-tailed)				0.276	0.595	0.939	0.571	0.001	0.597	.	0.375	0.375	0.652	0.731	0.006	0.928	0.046	0.014
F.D. Agrium inc.	Pearson Correlation				1	-0.022	-0.064	-0.046	-0.043	-0.028	.(a)	-0.043	-0.016	-0.072	-0.022	-0.068	-0.051	-0.059	-0.022
	Sig. (2-tailed)					0.749	0.365	0.516	0.544	0.694	.	0.544	0.821	0.302	0.749	0.332	0.465	0.401	0.749
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation					1	-0.028	-0.020	-0.019	-0.012	.(a)	-0.019	-0.007	-0.032	-0.010	-0.030	-0.022	-0.026	-0.010
	Sig. (2-tailed)						0.691	0.776	0.791	0.863	.	0.791	0.921	0.652	0.888	0.671	0.749	0.713	0.888
F.D.Bombardier Inc.	Pearson Correlation						1	-0.057	-0.053	-0.034	.(a)	-0.053	-0.020	-0.090	-0.028	-0.084	-0.064	-0.073	-0.028
	Sig. (2-tailed)							0.420	0.452	0.626	.	0.452	0.780	0.200	0.691	0.228	0.365	0.298	0.691
F.D.CAE Inc.	Pearson Correlation							1	-0.038	-0.025	.(a)	-0.038	-0.014	-0.064	-0.020	-0.061	-0.046	-0.052	-0.020
	Sig. (2-tailed)								0.590	0.727	.	0.590	0.841	0.359	0.776	0.388	0.516	0.455	0.776
F.D. Celstica Inc.	Pearson Correlation								1	-0.023	.(a)	-0.035	-0.013	-0.060	-0.019	-0.057	-0.043	-0.049	-0.019
	Sig. (2-tailed)									0.744	.	0.615	0.851	0.392	0.791	0.421	0.544	0.486	0.791
F.D. CHC helicopter corp.	Pearson Correlation									1	.(a)	-0.023	-0.009	-0.039	-0.012	-0.037	-0.028	-0.032	-0.012
	Sig. (2-tailed)										.	0.744	0.903	0.579	0.863	0.602	0.694	0.652	0.863
F.D. Dorel Industries Inc.	Pearson Correlation										.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)											.	.	.	.	.	.	.	.
F.D. Magna International Inc.	Pearson Correlation											1	-0.013	-0.060	-0.019	-0.057	-0.043	-0.049	-0.019
	Sig. (2-tailed)												0.851	0.392	0.791	0.421	0.544	0.486	0.791
F.D. Manulife finance co.	Pearson Correlation												1	-0.022	-0.007	-0.021	-0.016	-0.018	-0.007
	Sig. (2-tailed)													0.750	0.921	0.764	0.821	0.795	0.921
F.D. Nortel networks corp.	Pearson Correlation													1	-0.032	-0.096	-0.072	-0.083	-0.032
	Sig. (2-tailed)														0.652	0.170	0.302	0.236	0.652
F.D. Nova Chemicals Corp.	Pearson Correlation														1	-0.030	-0.022	-0.026	-0.010
	Sig. (2-tailed)															0.671	0.749	0.713	0.888
F.D. Quebecor inc.	Pearson Correlation															1	-0.068	-0.078	-0.030
	Sig. (2-tailed)																0.332	0.265	0.671
F.D.Royal Bank of Canada	Pearson Correlation																1	-0,059	-0,022
	Sig. (2-tailed)																	0,401	0,749
F.D. Saputo Inc.	Pearson Correlation																	1	-0,026
	Sig. (2-tailed)																		0,713
F.D. Sun Life Financial Inc.	Pearson Correlation																		1
	Sig. (2-tailed)																		

Table A.5.2.1.2: Firm specific effect correlation matrix for hypotheses 1 and 2 (continues)

		F.D. Allianz	F.D. Bayer	F.D. Beiersdorf	F.D. BMW	F.D. Commerzbank	F.D. DaimlerChrysler AG	F.D. Degussa AG	F.D. Deutsche Bank	F.D. Deutsche Post	F.D. Deutsche Telekom	F.D. E.ON AG	F.D. Heidelberg	F.D. Henkel	F.D. Karstadtquelle AG	F.D. Linde AG	F.D. MAN AG	F.D. Pixelpark AG	F.D. Schering	F.D. Siemens	F.D. Thyssen krupp AG	F.D. TUI AG	F.D. VW AG (=Volkswagen)
logAbsolute	Pearson Correlation	- 0.008	0.049	- 0.025	0.103	0.010	0.240	0.022	0.195	0.128	0.241	0.012	- 0.031	0.078	0.046	0.037	0.088	- 0.193	- 0.052	0.026	0.065	-0.009	0.083
	Sig. (2-tailed)	0.908	0.483	0.721	0.141	0.882	0.001	0.751	0.005	0.067	0.001	0.859	0.663	0.265	0.513	0.598	0.208	0.006	0.460	0.707	0.356	0.899	0.236
logTotal	Pearson Correlation	- 0.073	- 0.048	0.019	0.047	0.027	0.115	0.024	0.082	- 0.031	0.028	- 0.015	- 0.003	0.064	- 0.006	0.038	0.058	0.199	- 0.018	-0.432	-0.025	-0.032	-0.005
	Sig. (2-tailed)	0.298	0.493	0.791	0.505	0.699	0.100	0.728	0.244	0.658	0.693	0.832	0.966	0.365	0.929	0.590	0.410	0.004	0.794	0.000	0.724	0.648	0.943
logLocal	Pearson Correlation	- 0.069	- 0.069	0.132	0.025	0.091	0.048	- 0.052	0.099	- 0.119	0.041	0.082	- 0.012	0.130	0.034	- 0.014	0.074	0.269	0.021	-0.152	-0.079	-0.063	0.068
	Sig. (2-tailed)	0.328	0.329	0.059	0.725	0.196	0.495	0.462	0.157	0.089	0.557	0.245	0.864	0.064	0.625	0.846	0.291	0.000	0.765	0.030	0.260	0.366	0.330
F.D. Agrium inc.	Pearson Correlation	- 0.016	- 0.036	- 0.016	- 0.028	- 0.032	- 0.022	- 0.016	- 0.070	- 0.028	- 0.046	- 0.022	- 0.016	- 0.032	- 0.028	- 0.016	- 0.022	- 0.036	- 0.022	- 0.070	- 0.022	- 0.022	- 0.016
	Sig. (2-tailed)	0.821	0.610	0.821	0.694	0.649	0.749	0.821	0.317	0.694	0.516	0.749	0.821	0.649	0.694	0.821	0.749	0.610	0.749	0.317	0.749	0.749	0.821
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation	- 0.007	- 0.016	- 0.007	- 0.012	- 0.014	- 0.010	- 0.007	- 0.031	- 0.012	- 0.020	- 0.010	- 0.007	- 0.014	- 0.012	- 0.007	- 0.010	- 0.016	- 0.010	-0.031	-0.010	-0.010	-0.007
	Sig. (2-tailed)	0.921	0.823	0.921	0.863	0.842	0.888	0.921	0.661	0.863	0.776	0.888	0.921	0.842	0.863	0.921	0.888	0.823	0.888	0.661	0.888	0.888	0.921
F.D.Bombardier Inc.	Pearson Correlation	- 0.020	- 0.044	- 0.020	- 0.034	- 0.040	- 0.028	- 0.020	- 0.087	- 0.034	- 0.057	- 0.028	- 0.020	- 0.040	- 0.034	- 0.020	- 0.028	- 0.044	- 0.028	-0.087	-0.028	-0.028	-0.020
	Sig. (2-tailed)	0.780	0.527	0.780	0.626	0.573	0.691	0.780	0.214	0.626	0.420	0.691	0.780	0.573	0.626	0.780	0.691	0.527	0.691	0.214	0.691	0.691	0.780
F.D.CAE Inc.	Pearson Correlation	- 0.014	- 0.032	- 0.014	- 0.025	- 0.028	- 0.020	- 0.014	- 0.063	- 0.025	- 0.041	- 0.020	- 0.014	- 0.028	- 0.025	- 0.014	- 0.020	- 0.032	- 0.020	-0.063	-0.020	-0.020	-0.014
	Sig. (2-tailed)	0.841	0.650	0.841	0.727	0.686	0.776	0.841	0.373	0.727	0.563	0.776	0.841	0.686	0.727	0.841	0.776	0.650	0.776	0.373	0.776	0.776	0.841
F.D. Celstica Inc.	Pearson Correlation	- 0.013	- 0.030	- 0.013	- 0.023	- 0.027	- 0.019	- 0.013	- 0.058	- 0.023	- 0.038	- 0.019	- 0.013	- 0.027	- 0.023	- 0.013	- 0.019	- 0.030	- 0.019	-0.058	-0.019	-0.019	-0.013
	Sig. (2-tailed)	0.851	0.672	0.851	0.744	0.706	0.791	0.851	0.406	0.744	0.590	0.791	0.851	0.706	0.744	0.851	0.791	0.672	0.791	0.406	0.791	0.791	0.851
F.D. CHC helicopter corp.	Pearson Correlation	- 0.009	- 0.019	- 0.009	- 0.015	- 0.017	- 0.012	- 0.009	- 0.038	- 0.015	- 0.025	- 0.012	- 0.009	- 0.017	- 0.015	- 0.009	- 0.012	- 0.019	- 0.012	-0.038	-0.012	-0.012	-0.009
	Sig. (2-tailed)	0.903	0.784	0.903	0.833	0.807	0.863	0.903	0.590	0.833	0.727	0.863	0.903	0.807	0.833	0.903	0.863	0.784	0.863	0.590	0.863	0.863	0.903
F.D. Dorel Industries Inc.	Pearson Correlation	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
F.D. Magna International Inc.	Pearson Correlation	- 0.013	- 0.030	- 0.013	- 0.023	- 0.027	- 0.019	- 0.013	- 0.058	- 0.023	- 0.038	- 0.019	- 0.013	- 0.027	- 0.023	- 0.013	- 0.019	- 0.030	- 0.019	-0.058	-0.019	-0.019	-0.013
	Sig. (2-tailed)	0.851	0.672	0.851	0.744	0.706	0.791	0.851	0.406	0.744	0.590	0.791	0.851	0.706	0.744	0.851	0.791	0.672	0.791	0.406	0.791	0.791	0.851
F.D. Manulife finance co.	Pearson Correlation	- 0.005	- 0.011	- 0.005	- 0.009	- 0.010	- 0.007	- 0.005	- 0.022	- 0.009	- 0.014	- 0.007	- 0.005	- 0.010	- 0.009	- 0.005	- 0.007	- 0.011	- 0.007	-0.022	-0.007	-0.007	-0.005
	Sig. (2-tailed)	0.944	0.875	0.944	0.903	0.888	0.921	0.944	0.757	0.903	0.841	0.921	0.944	0.888	0.903	0.944	0.921	0.875	0.921	0.757	0.921	0.921	0.944
F.D. Nortel networks corp.	Pearson Correlation	- 0.022	- 0.051	- 0.022	- 0.039	- 0.045	- 0.032	- 0.022	- 0.099	- 0.039	- 0.064	- 0.032	- 0.022	- 0.045	- 0.039	- 0.022	- 0.032	- 0.051	- 0.032	-0.099	-0.032	-0.032	-0.022
	Sig. (2-tailed)	0.750	0.472	0.750	0.579	0.521	0.652	0.750	0.157	0.579	0.359	0.652	0.750	0.521	0.579	0.750	0.652	0.472	0.652	0.157	0.652	0.652	0.750
F.D. Nova Chemicals Corp.	Pearson Correlation	-0.007	- 0.016	- 0.007	- 0.012	- 0.014	- 0.010	- 0.007	- 0.031	- 0.012	- 0.020	- 0.010	- 0.007	- 0.014	- 0.012	- 0.007	- 0.010	- 0.016	- 0.010	-0.031	-0.010	-0.010	-0.007
	Sig. (2-tailed)	0.921	0.823	0.921	0.863	0.842	0.888	0.921	0.661	0.863	0.776	0.888	0.921	0.842	0.863	0.921	0.888	0.823	0.888	0.661	0.888	0.888	0.921
F.D. Quebecor inc.	Pearson Correlation	- 0.021	- 0.048	- 0.021	- 0.037	- 0.042	- 0.030	- 0.021	- 0.093	- 0.037	- 0.061	- 0.030	- 0.021	- 0.042	- 0.037	- 0.021	- 0.030	- 0.048	- 0.030	-0.093	-0.030	-0.030	-0.021
	Sig. (2-tailed)	0.764	0.498	0.764	0.602	0.546	0.671	0.764	0.183	0.602	0.388	0.671	0.764	0.546	0.602	0.764	0.671	0.498	0.671	0.183	0.671	0.671	0.764
F.D.Royal Bank of Canada	Pearson Correlation	- 0.016	- 0.036	- 0.016	- 0.028	- 0.032	- 0.022	- 0.016	- 0.070	- 0.028	- 0.046	- 0.022	- 0.016	- 0.032	- 0.028	- 0.016	- 0.022	- 0.036	- 0.022	-0.070	-0.022	-0.022	-0.016
	Sig. (2-tailed)	0.821	0.610	0.821	0.694	0.649	0.749	0.821	0.317	0.694	0.516	0.749	0.821	0.649	0.694	0.821	0.749	0.610	0.749	0.317	0.749	0.749	0.821
F.D. Saputo Inc.	Pearson Correlation	- 0.018	- 0.041	- 0.018	- 0.032	- 0.037	- 0.026	- 0.018	- 0.081	- 0.032	- 0.052	- 0.026	- 0.018	- 0.037	- 0.032	- 0.018	- 0.026	- 0.041	- 0.026	-0.081	-0.026	-0.026	-0.018
	Sig. (2-tailed)	0.795	0.558	0.795	0.652	0.601	0.713	0.795	0.250	0.652	0.455	0.713	0.795	0.601	0.652	0.795	0.713	0.558	0.713	0.250	0.713	0.713	0.795
F.D. Sun Life Financial Inc.	Pearson Correlation	- 0.007	- 0.016	- 0.007	- 0.012	- 0.014	- 0.010	- 0.007	- 0.031	- 0.012	- 0.020	- 0.010	- 0.007	- 0.014	- 0.012	- 0.007	- 0.010	- 0.016	- 0.010	-0.031	-0.010	-0.010	-0.007
	Sig. (2-tailed)	0.921	0.823	0.921	0.863	0.842	0.888	0.921	0.661	0.863	0.776	0.888	0.921	0.842	0.863	0.921	0.888	0.823	0.888	0.661	0.888	0.888	0.921
F.D. Allianz	Pearson Correlation	1	- 0.011	- 0.005	- 0.009	- 0.010	- 0.007	- 0.005	- 0.022	- 0.009	- 0.014	- .007	- 0.005	- 0.010	- 0.009	- 0.005	- 0.007	- 0.011	- 0.007	-0.022	-0.007	-0.007	-0.005
	Sig. (2-tailed)		0.875	0.944	0.903	0.888	0.921	0.944	0.757	0.903	0.841	0.921	0.944	0.888	0.903	0.944	0.921	0.875	0.921	0.757	0.921	0.921	0.944
F.D. Bayer	Pearson Correlation		1	-0.011	- 0.019	- 0.022	- 0.016	- 0.011	- 0.049	- 0.019	- 0.032	- 0.016	- 0.011	- 0.022	- 0.019	- 0.011	- 0.016	- 0.025	- 0.016	-0.049	-0.016	-0.016	-0.011
	Sig. (2-tailed)			0.875	0.784	0.751	0.823	0.875	0.485	0.784	0.650	0.823	0.875	0.751	0.784	0.875	0.823	0.722	0.823	0.485	0.823	0.823	0.875

		F.D. Allianz	F.D. Bayer	F.D. Beiersdorf	F.D. BMW	F.D. Commerzbank	F.D. DaimlerChrysler AG	F.D. Degussa AG	F.D. Deutsche Bank	F.D. Deutsche Post	F.D. Deutsche Telekom	F.D. E.ON AG	F.D. Heidelberg	F.D. Henkel	F.D. Karstadtquelle AG	F.D. Linde AG	F.D. MAN AG	F.D. Pixelpark AG	F.D. Schering	F.D. Siemens	F.D. Thyssenkrupp AG	F.D. TUI AG	F.D. VW AG (=Volkswagen)
F.D. Beiersdorf	Pearson Correlation			1	- 0.009	- 0.010	- 0.007	- 0.005	- 0.022	- 0.009	- 0.014	- 0.007	- 0.005	- 0.010	- 0.009	- 0.005	- 0.007	- 0.011	- 0.007	-0.022	-0.007	-0.007	-0.005
	Sig. (2-tailed)				0.903	0.888	0.921	0.944	0.757	0.903	0.841	0.921	0.944	0.888	0.903	0.944	0.921	0.875	0.921	0.757	0.921	0.921	0.944
F.D. BMW	Pearson Correlation				1	- 0.017	- 0.012	- 0.009	- 0.038	- 0.015	- 0.025	- 0.012	- 0.009	- 0.017	- 0.015	- 0.009	- 0.012	- 0.019	- 0.012	-0.038	-0.012	-0.012	-0.009
	Sig. (2-tailed)					0.807	0.863	0.903	0.590	0.833	0.727	0.863	0.903	0.807	0.833	0.903	0.863	0.784	0.863	0.590	0.863	0.863	0.903
F.D. Commerzbank	Pearson Correlation					1	- 0.014	- 0.010	- 0.044	- 0.017	- 0.028	- 0.014	- 0.010	- 0.020	- 0.017	- 0.010	- 0.014	- 0.022	- 0.014	-0.044	-0.014	-0.014	-0.010
	Sig. (2-tailed)						0.842	0.888	0.533	0.807	0.686	0.842	0.888	0.777	0.807	0.888	0.842	0.751	0.842	0.533	0.842	0.842	0.888
F.D. DaimlerChrysler AG	Pearson Correlation						1	- 0.007	- 0.031	- 0.012	- 0.020	- 0.010	- 0.007	- 0.014	- 0.012	- 0.007	- 0.010	- 0.016	- 0.010	-0.031	-0.010	-0.010	-0.007
	Sig. (2-tailed)							0.921	0.661	0.863	0.776	0.888	0.921	0.842	0.863	0.921	0.888	0.823	0.888	0.661	0.888	0.888	0.921
F.D. Degussa AG	Pearson Correlation							1	- 0.022	- 0.009	- 0.014	- 0.007	- 0.005	- 0.010	- 0.009	- 0.005	- 0.007	- 0.011	- 0.007	-0.022	-0.007	-0.007	-0.005
	Sig. (2-tailed)								0.757	0.903	0.841	0.921	0.944	0.888	0.903	0.944	0.921	0.875	0.921	0.757	0.921	0.921	0.944
F.D. Deutsche Bank	Pearson Correlation								1	- 0.038	- 0.063	- 0.031	- 0.022	- 0.044	- 0.038	- 0.022	- 0.031	- 0.049	- 0.031	-0.096	-0.031	-0.031	-0.022
	Sig. (2-tailed)									0.590	0.373	0.661	0.757	0.533	0.590	0.757	0.661	0.485	0.661	0.170	0.661	0.661	0.757
F.D. Deutsche Post	Pearson Correlation									1	- 0.025	- 0.012	- 0.009	- 0.017	- 0.015	- 0.009	- 0.012	- 0.019	- 0.012	-0.038	-0.012	-0.012	-0.009
	Sig. (2-tailed)										0.727	0.863	0.903	0.807	0.833	0.903	0.863	0.784	0.863	0.590	0.863	0.863	0.903
F.D. Deutsche Telekom	Pearson Correlation										1	- 0.020	- 0.014	- 0.028	- 0.025	- 0.014	- 0.020	- 0.032	- 0.020	-0.063	-0.020	-0.020	-0.014
	Sig. (2-tailed)											0.776	0.841	0.686	0.727	0.841	0.776	0.650	0.776	0.373	0.776	0.776	0.841
F.D. E.ON AG	Pearson Correlation											1	- 0.007	- 0.014	- 0.012	- 0.007	- 0.010	- 0.016	- 0.010	-0.031	-0.010	-0.010	-0.007
	Sig. (2-tailed)												0.921	0.842	0.863	0.921	0.888	0.823	0.888	0.661	0.888	0.888	0.921
F.D. Heidelberg	Pearson Correlation												1	- 0.010	- 0.009	- 0.005	- 0.007	- 0.011	- 0.007	-0.022	-0.007	-0.007	-0.005
	Sig. (2-tailed)													0.888	0.903	0.944	0.921	0.875	0.921	0.757	0.921	0.921	0.944
F.D. Henkel	Pearson Correlation													1	- 0.017	- 0.010	- 0.014	- 0.022	- 0.014	-0.044	-0.014	-0.014	-0.010
	Sig. (2-tailed)														0.807	0.888	0.842	0.751	0.842	0.533	0.842	0.842	0.888
F.D. Karstadtquelle AG	Pearson Correlation														1	- 0.009	- 0.012	- 0.019	- 0.012	-0.038	-0.012	-0.012	-0.009
	Sig. (2-tailed)															0.903	0.863	0.784	0.863	0.590	0.863	0.863	0.903
F.D. Linde AG	Pearson Correlation															1	- 0.007	- 0.011	- 0.007	-0.022	-0.007	-0.007	-0.005
	Sig. (2-tailed)																0.921	0.875	0.921	0.757	0.921	0.921	0.944
F.D. MAN AG	Pearson Correlation																1	- 0.016	- 0.010	-0.031	-0.010	-0.010	-0.007
	Sig. (2-tailed)																	0.823	0.888	0.661	0.888	0.888	0.921
F.D. Pixelpark AG	Pearson Correlation																	1	- 0.016	-0.049	-0.016	-0.016	-0.011
	Sig. (2-tailed)																		0.823	0.485	0.823	0.823	0.875
F.D. Schering	Pearson Correlation																		1	-0.031	-0.010	-0.010	-0.007
	Sig. (2-tailed)																			0.661	0.888	0.888	0.921
F.D. Siemens	Pearson Correlation																			1	-0.031	-0.031	-0.022
	Sig. (2-tailed)																				0.661	0.661	0.757
F.D. Thyssenkrupp AG	Pearson Correlation																				1	-0.010	-0.007
	Sig. (2-tailed)																					0.888	0.921
F.D. TUI AG	Pearson Correlation																					1	-0.007
	Sig. (2-tailed)																						0.921
F.D. VW AG (=Volkswagen)	Pearson Correlation																						1
	Sig. (2-tailed)																						

N = 205

Appendix 5.2.2 DUMMY CONTROL VARIABLES HYPOTHESIS 3

Table A.5.2.2.1 Cross-check on grouped dummy control variables hypothesis 3 (*Performance average last 3 years)*

Control variable	R^2	*Adj.* R^2	*F- value*
• *ROE*			
Firm specific effect	0.972	.966	163.772***
Industry specific effect (2 digits)	0.407	.353	7.597***
Industry specific effect (1 digit)	0.209	.182	7.717***
• *ROA*			
Firm specific effect	0.340	.198	2.395***
Industry specific effect (2 digits)	0.159	.083	2.093*
Industry specific effect (1 digit)	0.141	.111	4.784***
• *Tobin's Q 1)*			
Firm specific effect	1.000	1.000	.
Industry specific effect (2 digits)	0.933	.927	153.819***
Industry specific effect (1 digit)	0.121	.091	4.030***
• *Tobin's Q 2)*			
Firm specific effect	1.000	1.000	256323.9***
Industry specific effect (2 digits)	0.952	.947	217.875***
Industry specific effect (1 digit)	0.141	.112	4.797***

LEGENDA:

***. Correlation is significant at the 0.001 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

†. Correlation is significant at the 0.1 level (2-tailed).

Table A.5.2.2.2 Firm specific effect correlation matrix for hypotheses 3 (*Performance average last 3 years)*

		ROE LAST 3	ROA LAST 3	1)TOBIN'S Q last 3	2)TOBIN'S Q last 3	F.D. Agrium inc.	F.D. ATS Automation Tooling Systems Inc	F.D.Bombardier Inc.	F.D.CAE Inc.	F.D. Celstica Inc.	F.D. CHC helicopter corp.	F.D. Magna International Inc.	F.D. Manulife finance co.	F.D. Nortel networks corp.	F.D. Nova Chemicals Corp.	F.D. Quebecor inc.	F.D.Royal Bank of Canada	F.D. Saputo Inc.	F.D. Sun Life Financial Inc.
ROE LAST 3	Pearson Correlation	1	- 0.197	0.016	- 0.082	0.048	- 0.149	- 0.025	0.022	- 0.313	- 0.007	- 0.025	0.000	0.734	- 0.257	- 0.431	0.079	0.048	0.159
	Sig. (2-tailed)		0.008	0.826	0.270	0.523	0.045	0.739	0.768	0.000	0.923	0.736	0.996	0.000	0.000	0.000	0.288	0.518	0.033
ROA LAST 3	Pearson Correlation		1	0.035	0.088	0.153	- 0.093	0.035	0.110	- 0.131	0.034	0.020	0.005	- 0.732	- 0.038	- 0.062	0.015	0.200	0.407
	Sig. (2-tailed)			0.643	0.236	0.039	0.211	0.637	0.138	0.079	0.648	0.793	0.948	0.000	0.611	0.406	0.845	0.007	0.000
1)TOBIN'S Q last 3	Pearson Correlation			1	0.972	0.087	0.886	- 0.094	0.116	- 0.122	- 0.038	- 0.043	- 0.037	- 0.009	- 0.002	- 0.151	- 0.164	0.145	- 0.056
	Sig. (2-tailed)				0.000	0.245	0.000	0.206	0.120	0.100	0.608	0.565	0.617	0.903	0.978	0.042	0.027	0.050	0.453
2)TOBIN'S Q last 3	Pearson Correlation				1	0.153	0.859	- 0.103	0.154	- 0.088	0.021	- 0.027	- 0.051	- 0.091	0.041	- 0.064	- 0.139	0.257	- 0.073
	Sig. (2-tailed)					0.039	0.000	0.166	0.038	0.238	0.778	0.718	0.491	0.221	0.583	0.388	0.062	0.000	0.325
F.D. Agrium inc.	Pearson Correlation					1	- 0.024	- 0.066	- 0.049	- 0.042	- 0.030	- 0.017	- 0.017	- 0.076	- 0.024	- 0.066	- 0.052	- 0.052	- 0.024
	Sig. (2-tailed)						0.747	0.377	0.512	0.572	0.692	0.820	0.820	0.311	0.747	0.377	0.486	0.486	0.747
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation						1	- 0.030	- 0.023	- 0.019	- 0.014	- 0.008	- 0.008	- 0.035	- 0.011	- 0.030	- 0.024	- 0.024	- 0.011
	Sig. (2-tailed)							0.683	0.762	0.794	0.855	0.916	0.916	0.640	0.882	0.683	0.747	0.747	0.882
F.D.Bombardier Inc.	Pearson Correlation							1	- 0.062	- 0.053	- 0.037	- 0.021	- 0.021	- 0.096	- 0.030	- 0.083	- 0.066	- 0.066	- 0.030
	Sig. (2-tailed)								0.406	0.475	0.616	0.774	0.774	0.199	0.683	0.263	0.377	0.377	0.683
F.D.CAE Inc.	Pearson Correlation								1	- 0.040	- 0.028	- 0.016	- 0.016	- 0.071	- 0.023	- 0.062	- 0.049	- 0.049	- 0.023
	Sig. (2-tailed)									0.596	0.710	0.831	0.831	0.341	0.762	0.406	0.512	0.512	0.762
F.D. Celstica Inc.	Pearson Correlation									1	- 0.024	- 0.014	- 0.014	- 0.061	- 0.019	- 0.053	- 0.042	- 0.042	- 0.019
	Sig. (2-tailed)										0.749	0.854	0.854	0.412	0.794	0.475	0.572	0.572	0.794
F.D. CHC helicopter corp.	Pearson Correlation										1	- 0.010	- 0.010	- 0.043	- 0.014	- 0.037	- 0.030	- 0.030	- 0.014
	Sig. (2-tailed)											0.897	0.897	0.565	0.855	0.616	0.692	0.692	0.855
F.D. Magna International Inc.	Pearson Correlation											1	- 0.006	- 0.025	- 0.008	- 0.021	- 0.017	- 0.017	- 0.008
	Sig. (2-tailed)												0.941	0.741	0.916	0.774	0.820	0.820	0.916
F.D. Manulife finance co.	Pearson Correlation												1	- 0.025	- 0.008	- 0.021	- 0.017	- 0.017	- 0.008
	Sig. (2-tailed)													0.741	0.916	0.774	0.820	0.820	0.916
F.D. Nortel networks corp.	Pearson Correlation													1	- 0.035	- 0.096	- 0.076	- 0.076	- 0.035
	Sig. (2-tailed)														0.640	0.199	0.311	0.311	0.640
F.D. Nova Chemicals Corp.	Pearson Correlation														1	- 0.030	- 0.024	- 0.024	- 0.011
	Sig. (2-tailed)															0.683	0.747	0.747	0.882
F.D. Quebecor inc.	Pearson Correlation															1	- 0.066	- 0.066	- 0.030
	Sig. (2-tailed)																0.377	0.377	0.683
F.D.Royal Bank of Canada	Pearson Correlation																1	- 0.052	- 0.024
	Sig. (2-tailed)																	0.486	0.747
F.D. Saputo Inc.	Pearson Correlation																	1	- 0.024
	Sig. (2-tailed)																		0.747
F.D. Sun Life Financial Inc.	Pearson Correlation																		1
	Sig. (2-tailed)																		

Table A.5.2.2.2 Firm specific effect correlation matrix for hypothesis 3 (*Performance average last 3 years*) (continues)

		F.D. Bayer	F.D. Commerzbank	F.D. Daimler Chrysler AG	F.D. Degussa AG	F.D. Deutsche Bank	F.D. Deutsche Post	F.D. Deutsche Telekom	F.D. E.ON AG	F.D. Heidelberg	F.D. Henkel	F.D. Karstadt quelle AG	F.D. Linde AG	F.D. MAN AG	F.D. Pixelpark AG	F.D. Schering	F.D. Siemens	F.D. Thyssenkrupp AG	F.D. TUI AG	F.D. VW AG
ROE LAST 3	Pearson Correlation	0.049	- 0.034	- 0.020	- 0.093	- 0.071	- 0.065	- 0.100	- 0.015	0.039	0.040	- 0.089	0.008	0.066	- 0.148	0.099	0.063	0.042	- 0.121	0.001
	Sig. (2-tailed)	0.510	0.652	0.792	0.214	0.339	0.381	0.180	0.843	0.597	0.590	0.230	0.912	0.374	0.047	0.182	0.397	0.573	0.104	0.990
ROA LAST 3	Pearson Correlation	0.078	0.001	0.017	- 0.026	0.002	0.002	0.025	0.033	0.049	0.096	0.010	0.030	0.067	- 0.049	0.201	0.138	0.049	- 0.022	0.058
	Sig. (2-tailed)	0.292	0.989	0.816	0.729	0.980	0.980	0.736	0.660	0.514	0.197	0.888	0.688	0.367	0.511	0.006	0.064	0.511	0.765	0.433
1)TOBIN'S Q last 3	Pearson Correlation	0.031	- 0.087	- 0.025	0.016	- 0.185	- 0.060	- 0.015	0.003	0.002	0.072	- 0.018	- 0.004	0.018	- 0.024	0.217	0.094	- 0.012	- 0.034	- 0.014
	Sig. (2-tailed)	0.681	0.241	0.737	0.833	0.013	0.419	0.836	0.970	0.983	0.332	0.811	0.963	0.813	0.744	0.003	0.206	0.871	0.653	0.853
2)TOBIN'S Q last 3	Pearson Correlation	0.025	- 0.055	- 0.011	0.005	- 0.241	- 0.075	- 0.005	- 0.014	0.007	0.054	- 0.054	- 0.002	- 0.007	- 0.064	0.173	0.012	- 0.042	- 0.037	- 0.011
	Sig. (2-tailed)	0.737	0.464	0.878	0.947	0.001	0.316	0.944	0.854	0.927	0.465	0.469	0.975	0.922	0.389	0.020	0.876	0.578	0.622	0.887
F.D. Agrium inc.	Pearson Correlation	- 0.038	- 0.034	- 0.024	- 0.017	- 0.076	- 0.030	- 0.049	- 0.024	- 0.017	- 0.034	- 0.030	- 0.017	- 0.024	- 0.038	- 0.024	- 0.076	- 0.024	- 0.024	- 0.017
	Sig. (2-tailed)	0.607	0.647	0.747	0.820	0.311	0.692	0.512	0.747	0.820	0.647	0.692	0.820	0.747	0.607	0.747	0.311	0.747	0.747	0.820
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation	- 0.018	- 0.016	- 0.011	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	- 0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)	0.812	0.832	0.882	0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D.Bombardier Inc.	Pearson Correlation	- 0.049	- 0.043	- 0.030	- 0.021	- 0.096	- 0.037	- 0.062	- 0.030	- 0.021	- 0.043	- 0.037	- 0.021	- 0.030	- 0.049	- 0.030	- 0.096	- 0.030	- 0.030	- 0.021
	Sig. (2-tailed)	0.515	0.562	0.683	0.774	0.199	0.616	0.406	0.683	0.774	0.562	0.616	0.774	0.683	0.515	0.683	0.199	0.683	0.683	0.774
F.D.CAE Inc.	Pearson Correlation	- 0.036	- 0.032	- 0.023	- 0.016	- 0.071	- 0.028	- 0.046	- 0.023	- 0.016	- 0.032	- 0.028	- 0.016	- 0.023	- 0.036	- 0.023	- 0.071	- 0.023	- 0.023	- 0.016
	Sig. (2-tailed)	0.629	0.667	0.762	0.831	0.341	0.710	0.538	0.762	0.831	0.667	0.710	0.831	0.762	0.629	0.762	0.341	0.762	0.762	0.831
F.D. Celstica Inc.	Pearson Correlation	- 0.031	- 0.028	- 0.019	- 0.014	- 0.061	- 0.024	- 0.040	- 0.019	- 0.014	- 0.028	- 0.024	- 0.014	- 0.019	- 0.031	- 0.019	- 0.061	- 0.019	- 0.019	- 0.014
	Sig. (2-tailed)	0.678	0.711	0.794	0.854	0.412	0.749	0.596	0.794	0.854	0.711	0.749	0.854	0.794	0.678	0.794	0.412	0.794	0.794	0.854
F.D. CHC helicopter corp.	Pearson Correlation	- 0.022	- 0.019	- 0.014	- 0.010	- 0.043	- 0.017	- 0.028	- 0.014	- 0.010	- 0.019	- 0.017	- 0.010	- 0.014	- 0.022	- 0.014	- 0.043	- 0.014	- 0.014	- 0.010
	Sig. (2-tailed)	0.771	0.795	0.855	0.897	0.565	0.822	0.710	0.855	0.897	0.795	0.822	0.897	0.855	0.771	0.855	0.565	0.855	0.855	0.897
F.D. Magna International Inc.	Pearson Correlation	- 0.012	- 0.011	- 0.008	- 0.006	- 0.025	- 0.010	- 0.016	- 0.008	- 0.006	- 0.011	- 0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)	0.867	0.881	0.916	0.941	0.741	0.897	0.831	0.916	0.941	0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Manulife finance co.	Pearson Correlation	- 0.012	- 0.011	- 0.008	- 0.006	- 0.025	- 0.010	- 0.016	- 0.008	- 0.006	- 0.011	- 0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)	0.867	0.881	0.916	0.941	0.741	0.897	0.831	0.916	0.941	0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Nortel networks corp.	Pearson Correlation	- 0.056	- 0.050	- 0.035	- 0.025	- 0.110	- 0.043	- 0.071	- 0.035	- 0.025	- 0.050	- 0.043	- 0.025	- 0.035	- 0.056	- 0.035	- 0.110	- 0.035	- 0.035	- 0.025
	Sig. (2-tailed)	0.455	0.506	0.640	0.741	0.140	0.565	0.341	0.640	0.741	0.506	0.565	0.741	0.640	0.455	0.640	0.140	0.640	0.640	0.741
F.D. Nova Chemicals Corp.	Pearson Correlation	- 0.018	- 0.016	- 0.011	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	- 0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)	0.812	0.832	0.882	0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Quebecor inc.	Pearson Correlation	- 0.049	- 0.043	- 0.030	- 0.021	- 0.096	- 0.037	- 0.062	- 0.030	- 0.021	- 0.043	- 0.037	- 0.021	- 0.030	- 0.049	- 0.030	- 0.096	- 0.030	- 0.030	- 0.021
	Sig. (2-tailed)	0.515	0.562	0.683	0.774	0.199	0.616	0.406	0.683	0.774	0.562	0.616	0.774	0.683	0.515	0.683	0.199	0.683	0.683	0.774
F.D.Royal Bank of Canada	Pearson Correlation	- 0.038	- 0.034	- 0.024	- 0.017	- 0.076	- 0.030	- 0.049	- 0.024	- 0.017	- 0.034	- 0.030	- 0.017	- 0.024	- 0.038	- 0.024	- 0.076	- 0.024	- 0.024	- 0.017
	Sig. (2-tailed)	0.607	0.647	0.747	0.820	0.311	0.692	0.512	0.747	0.820	0.647	0.692	0.820	0.747	0.607	0.747	0.311	0.747	0.747	0.820
F.D. Saputo Inc.	Pearson Correlation	- 0.038	- 0.034	- 0.024	- 0.017	- 0.076	- 0.030	- 0.049	- 0.024	- 0.017	- 0.034	- 0.030	- 0.017	- 0.024	- 0.038	- 0.024	- 0.076	- 0.024	- 0.024	- 0.017
	Sig. (2-tailed)	0.607	0.647	0.747	0.820	0.311	0.692	0.512	0.747	0.820	0.647	0.692	0.820	0.747	0.607	0.747	0.311	0.747	0.747	0.820
F.D. Sun Life Financial Inc.	Pearson Correlation	- 0.018	- 0.016	- 0.011	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	- 0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)	0.812	0.832	0.882	0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Bayer	Pearson Correlation	1	- 0.025	- 0.018	- 0.012	- 0.056	- 0.022	- 0.036	- 0.018	- 0.012	- 0.025	- 0.022	- 0.012	- 0.018	- 0.028	- 0.018	- 0.056	- 0.018	- 0.018	- 0.012
	Sig. (2-tailed)		0.736	0.812	0.867	0.455	0.771	0.629	0.812	0.867	0.736	0.771	0.867	0.812	0.705	0.812	0.455	0.812	0.812	0.867

		F.D. Bayer	F.D. Commerzbank	F.D. Daimler Chrysler AG	F.D. Degussa AG	F.D. Deutsche Bank	F.D. Deutsche Post	F.D. Deutsche Telekom	F.D. E.ON AG	F.D. Heidelberg	F.D. Henkel	F.D. Karstadtquelle AG	F.D. Linde AG	F.D. MAN AG	F.D. Pixelpark AG	F.D. Schering	F.D. Siemens	F.D. Thyssenkrupp AG	F.D. TUI AG	F.D. VW AG
F.D. Commerzbank	Pearson Correlation		1	- 0.016	- 0.011	- 0.050	- 0.019	- 0.032	- 0.016	- 0.011	- 0.022	- 0.019	- 0.011	- 0.016	- 0.025	- 0.016	- 0.050	- 0.016	- 0.016	- 0.011
	Sig. (2-tailed)			0.832	0.881	0.506	0.795	0.667	0.832	0.881	0.763	0.795	0.881	0.832	0.736	0.832	0.506	0.832	0.832	0.881
F.D. DaimlerChrysler AG	Pearson Correlation			1	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	- 0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)				0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Degussa AG	Pearson Correlation				1	- 0.025	- 0.010	- 0.016	- 0.008	- 0.006	- 0.011	- 0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)					0.741	0.897	0.831	0.916	0.941	0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Deutsche Bank	Pearson Correlation					1	- 0.043	- 0.071	- 0.035	- 0.025	- 0.050	- 0.043	- 0.025	- 0.035	- 0.056	- 0.035	- 0.110	- 0.035	- 0.035	- 0.025
	Sig. (2-tailed)						0.565	0.341	0.640	0.741	0.506	0.565	0.741	0.640	0.455	0.640	0.140	0.640	0.640	0.741
F.D. Deutsche Post	Pearson Correlation						1	- 0.028	- 0.014	- 0.010	- 0.019	- 0.017	- 0.010	- 0.014	- 0.022	- 0.014	- 0.043	- 0.014	- 0.014	- 0.010
	Sig. (2-tailed)							0.710	0.855	0.897	0.795	0.822	0.897	0.855	0.771	0.855	0.565	0.855	0.855	0.897
F.D. Deutsche Telekom	Pearson Correlation							1	- 0.023	- 0.016	- 0.032	- 0.028	- 0.016	- 0.023	- 0.036	- 0.023	- 0.071	- 0.023	- 0.023	- 0.016
	Sig. (2-tailed)								0.762	0.831	0.667	0.710	0.831	0.762	0.629	0.762	0.341	0.762	0.762	0.831
F.D. E.ON AG	Pearson Correlation								1	- 0.008	- 0.016	- 0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)									0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Heidelberg	Pearson Correlation									1	- 0.011	- 0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)										0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Henkel	Pearson Correlation										1	- 0.019	- 0.011	- 0.016	- 0.025	- 0.016	- 0.050	- 0.016	- 0.016	- 0.011
	Sig. (2-tailed)											0.795	0.881	0.832	0.736	0.832	0.506	0.832	0.832	0.881
F.D. Karstadtquelle AG	Pearson Correlation											1	- 0.010	- 0.014	- 0.022	- 0.014	- 0.043	- 0.014	- 0.014	- 0.010
	Sig. (2-tailed)												0.897	0.855	0.771	0.855	0.565	0.855	0.855	0.897
F.D. Linde AG	Pearson Correlation												1	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)													0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. MAN AG	Pearson Correlation													1	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)														0.812	0.882	0.640	0.882	0.882	0.916
F.D. Pixelpark AG	Pearson Correlation														1	- 0.018	- 0.056	- 0.018	- 0.018	- 0.012
	Sig. (2-tailed)															0.812	0.455	0.812	0.812	0.867
F.D. Schering	Pearson Correlation															1	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)																0.640	0.882	0.882	0.916
F.D. Siemens	Pearson Correlation																1	- 0.035	- 0.035	- 0.025
	Sig. (2-tailed)																	0.640	0.640	0.741
F.D. Thyssenkrupp AG	Pearson Correlation																	1	- 0.011	- 0.008
	Sig. (2-tailed)																		0.882	0.916
F.D. TUI AG	Pearson Correlation																		1	- 0.008
	Sig. (2-tailed)																			0.916
F.D. VW AG	Pearson Correlation																			1
	Sig. (2-tailed)																			

N = 182

Appendix 5.2.3 DUMMY CONTROL VARIABLES ADDITIONAL ANALYSIS HYPOTHESIS 3

Table A.5.2.3.1 Cross-check on grouped dummy control variables additional analysis hypothesis 3 (*Performance for the year following the layoff [t+1]*)

Control variable	***R^2***	***Adj. R^2***	***F- value***
• *ROE*			
Firm specific effect	0.652	.577	8.705***
Industry specific effect (2 digits)	0.330	.270	5.461***
Industry specific effect (1 digit)	0.233	.206	8.842***
• *ROA*			
Firm specific effect	0.814	.774	20.354***
Industry specific effect (2 digits)	0.272	.207	4.141***
Industry specific effect (1 digit)	0.202	.174	7.362***
• *Tobin's Q 1)*			
Firm specific effect	0.733	.676	12.805***
Industry specific effect (2 digits)	0.671	.642	22.613***
Industry specific effect (1 digit)	0.147	.118	5.035***
• *Tobin's Q 2)*			
Firm specific effect	0.736	.680	12.998***
Industry specific effect (2 digits)	0.662	.632	21.716***
Industry specific effect (1 digit)	0.131	.101	4.395***

LEGENDA:

***. Correlation is significant at the 0.001 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

†. Correlation is significant at the 0.1 level (2-tailed).

Table A.5.2.3.2 Firm specific effect correlation matrix for additional analysis hypothesis 3
(Performance for the year following the layoff [t+1])

		ROE t+1	ROA t+1	1) T'S Q t+1	2) T'S Q t+1	F.D. Agrium inc.	F.D. ATS Automation Tooling Systems Inc	F.D.Bombardier Inc.	F.D.CAE Inc.	F.D. Celstica Inc.	F.D. CHC helicopter corp.	F.D. Dorel Industries Inc.	F.D. Magna International Inc.	F.D. Manulife finance co.	F.D. Nortel networks corp.	F.D. Nova Chemicals Corp.	F.D. Quebecor inc.	F.D.Royal Bank of Canada	F.D. Saputo Inc.	F.D. Sun Life Financial Inc.
ROE t+1	Pearson Correlation	1	0,918	- 0.122	0.014	0.068	0.008	0.037	0.043	- 0.013	0.046	.(a)	0.026	0.029	- 0.400	0.031	0.059	0.086	0.090	0.068
	Sig. (2-tailed)		0,000	0.100	0.850	0.360	0.911	0.624	0.566	0.858	0.536	.	0.724	0.702	0.000	0.681	0.430	0.248	0.225	0.361
ROA t+1	Pearson Correlation		1	- 0.101	0.049	0.061	- 0.004	0.042	0.034	- 0.037	0.038	.(a)	0.033	0.014	- 0.211	0.027	0.050	0.041	0.105	0.163
	Sig. (2-tailed)			0.176	0.512	0.414	0.956	0.574	0.650	0.620	0.612	.	0.661	0.847	0.004	0.719	0.500	0.578	0.158	0.028
1) T'S Q t+1	Pearson Correlation			1	0.944	0.024	0.699	- 0.014	0.181	- 0.084	- 0.061	.(a)	- 0.049	- 0.041	0.201	- 0.031	- 0.139	- 0.194	0.058	- 0.068
	Sig. (2-tailed)				0.000	0.751	0.000	0.850	0.014	0.258	0.417	.	0.511	0.581	0.006	0.683	0.061	0.009	0.438	0.361
2) T'S Q t+1	Pearson Correlation				1	0.119	0.669	0.017	0.235	- 0.029	0.004	.(a)	- 0.019	- 0.058	0.160	0.022	- 0.045	- 0.178	0.194	- 0.091
	Sig. (2-tailed)					0.110	0.000	0.825	0.001	0.693	0.955	.	0.803	0.439	0.031	0.771	0.543	0.017	0.009	0.221
F.D. Agrium inc.	Pearson Correlation					1	- 0.024	- 0.066	- 0.049	- 0.042	- 0.030	.(a)	- 0.017	- 0.017	- 0.076	- 0.024	- 0.066	- 0.052	- 0.052	- 0.024
	Sig. (2-tailed)						0.747	0.377	0.512	0.572	0.692	.	0.820	0.820	0.311	0.747	0.377	0.486	0.486	0.747
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation						1	- 0.030	- 0.023	- 0.019	- 0.014	.(a)	- 0.008	- 0.008	- 0.035	- 0.011	- 0.030	- 0.024	- 0.024	- 0.011
	Sig. (2-tailed)							0.683	0.762	0.794	0.855	.	0.916	0.916	0.640	0.882	0.683	0.747	0.747	0.882
F.D.Bombardier Inc.	Pearson Correlation							1	- 0.062	- 0.053	- 0.037	.(a)	- 0.021	- 0.021	- 0.096	- 0.030	- 0.083	- 0.066	- 0.066	- 0.030
	Sig. (2-tailed)								0.406	0.475	0.616	.	0.774	0.774	0.199	0.683	0.263	0.377	0.377	0.683
F.D.CAE Inc.	Pearson Correlation								1	- 0.040	- 0.028	.(a)	- 0.016	- 0.016	- 0.071	- 0.023	- 0.062	- 0.049	- 0.049	- 0.023
	Sig. (2-tailed)									0.596	0.710	.	0.831	0.831	0.341	0.762	0.406	0.512	0.512	0.762
F.D. Celstica Inc.	Pearson Correlation									1	- 0.024	.(a)	- 0.014	- 0.014	- 0.061	- 0.019	- 0.053	- 0.042	- 0.042	- 0.019
	Sig. (2-tailed)										0.749	.	0.854	0.854	0.412	0.794	0.475	0.572	0.572	0.794
F.D. CHC helicopter corp.	Pearson Correlation										1	.(a)	- 0.010	- 0.010	- 0.043	- 0.014	- 0.037	- 0.030	- 0.030	- 0.014
	Sig. (2-tailed)											.	0.897	0.897	0.565	0.855	0.616	0.692	0.692	0.855
F.D. Dorel Industries Inc.	Pearson Correlation											.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)												.	.	.	.	.	.	.	.
F.D. Magna International Inc.	Pearson Correlation												1	- 0.006	- 0.025	- 0.008	- 0.021	- 0.017	- 0.017	- 0.008
	Sig. (2-tailed)													0.941	0.741	0.916	0.774	0.820	0.820	0.916
F.D. Manulife finance co.	Pearson Correlation													1	- 0.025	- 0.008	- 0.021	- 0.017	- 0.017	- 0.008
	Sig. (2-tailed)														0.741	0.916	0.774	0.820	0.820	0.916
F.D. Nortel networks corp.	Pearson Correlation														1	- 0.035	- 0.096	- 0.076	- 0.076	- 0.035
	Sig. (2-tailed)															0.640	0.199	0.311	0.311	0.640
F.D. Nova Chemicals Corp.	Pearson Correlation															1	- 0.030	- 0.024	- 0.024	- 0.011
	Sig. (2-																0.683	0.747	0.747	0.882
F.D. Quebecor inc.	Pearson Correlation																1	- 0.066	- 0.066	- 0.030
	Sig. (2-tailed)																	0.377	0.377	0.683
F.D.Royal Bank of Canada	Pearson Correlation																	1	- 0.052	- 0.024
	Sig. (2-tailed)																		0.486	0.747
F.D. Saputo Inc.	Pearson Correlation																		1	- 0.024
	Sig. (2-tailed)																			0.747
F.D. Sun Life Financial Inc.	Pearson Correlation																			1
	Sig. (2-tailed)																			

Table A.5.3.2.2 - Firm specific effect correlation matrix for additional analysis hypothesis 3 (*Performance for the year following the layoff [t+1]*) (continues)

		F.D. Allianz	F.D. Bayer	F.D. Beiersdorf	F.D. BMW	F.D. Commerzbank	F.D. DaimlerChrysler AG	F.D. Degussa AG	F.D. Deutsche Bank	F.D. Deutsche Post	F.D. Deutsche Telekom	F.D. E.ON AG	F.D. Heidelberg	F.D. Henkel	F.D. Karstadtquelle AG	F.D. Linde AG	F.D. MAN AG	F.D. Pixelpark AG	F.D. Schering	F.D. Siemens	F.D. Thyssenkrupp AG	F.D. TUI AG	F.D. VW AG
ROE t+1	Pearson Correlation	.(a)	0.053	.(a)	.(a)	0.025	0.038	0.003	0.108	0.056	0.063	0.040	0.005	0.054	-0.094	0.023	0.026	- 0.657	0.045	0.110	0.033	0.047	0.017
	Sig. (2-tailed)	.	0.481	.	.	0.737	0.613	0.973	0.148	0.453	0.395	0.592	0.947	0.470	0.207	0.758	0.729	0.000	0.545	0.138	0.657	0.532	0.823
ROA t+1	Pearson Correlation	.(a)	0.045	.(a)	.(a)	0.023	0.026	0.002	0.058	0.025	0.057	0.038	0.003	0.051	0.011	0.020	0.021	- 0.845	0.054	0.095	0.025	0.032	0.013
	Sig. (2-tailed)	.	0.542	.	.	0.757	0.730	0.979	0.435	0.742	0.444	0.609	0.973	0.493	0.880	0.788	0.782	0.000	0.468	0.202	0.735	0.666	0.862
1) T'S Q t+1	Pearson Correlation	.(a)	- 0.009	.(a)	.(a)	- 0.105	- 0.050	0.011	- 0.213	- 0.067	- 0.014	- 0.008	- 0.011	0.067	-0.041	- 0.006	- 0.049	0.030	0.162	0.076	- 0.037	- 0.038	- 0.040
	Sig. (2-tailed)	.	0.902	.	.	0.158	0.503	0.888	0.004	0.367	0.853	0.913	0.879	0.372	0.579	0.933	0.508	0.686	0.028	0.307	0.620	0.613	0.589
2) T'S Q t+1	Pearson Correlation	.(a)	- 0.032	.(a)	.(a)	- 0.083	- 0.041	- 0.004	- 0.252	- 0.069	- 0.006	- 0.045	- 0.008	0.027	-0.083	- 0.014	- 0.079	- 0.134	0.096	- 0.054	- 0.062	- 0.041	- 0.031
	Sig. (2-tailed)	.	0.669	.	.	0.263	0.587	0.957	0.001	0.353	0.932	0.542	0.911	0.713	0.262	0.847	0.288	0.071	0.196	0.473	0.405	0.586	0.674
F.D. Agrium inc.	Pearson Correlation	.(a)	- 0.038	.(a)	.(a)	- 0.034	- 0.024	- 0.017	- 0.076	- 0.030	- 0.049	- 0.024	- 0.017	- 0.034	-0.030	- 0.017	- 0.024	- 0.038	- 0.024	- 0.076	- 0.024	- 0.024	- 0.017
	Sig. (2-tailed)	.	0.607	.	.	0.647	0.747	0.820	0.311	0.692	0.512	0.747	0.820	0.647	0.692	0.820	0.747	0.607	0.747	0.311	0.747	0.747	0.820
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation	.(a)	- 0.018	.(a)	.(a)	- 0.016	- 0.011	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	-0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)	.	0.812	.	.	0.832	0.882	0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D.Bombardier Inc.	Pearson Correlation	.(a)	- 0.049	.(a)	.(a)	- 0.043	- 0.030	- 0.021	- 0.096	- 0.037	- 0.062	- 0.030	- 0.021	- 0.043	-0.037	- 0.021	- 0.030	- 0.049	- 0.030	- 0.096	- 0.030	- 0.030	- 0.021
	Sig. (2-tailed)	.	0.515	.	.	0.562	0.683	0.774	0.199	0.616	0.406	0.683	0.774	0.562	0.616	0.774	0.683	0.515	0.683	0.199	0.683	0.683	0.774
F.D.CAE Inc.	Pearson Correlation	.(a)	- 0.036	.(a)	.(a)	- 0.032	- 0.023	- 0.016	- 0.071	- 0.028	- 0.046	- 0.023	- 0.016	- 0.032	-0.028	- 0.016	- 0.023	- 0.036	- 0.023	- 0.071	- 0.023	- 0.023	- 0.016
	Sig. (2-tailed)	.	0.629	.	.	0.667	0.762	0.831	0.341	0.710	0.538	0.762	0.831	0.667	0.710	0.831	0.762	0.629	0.762	0.341	0.762	0.762	0.831
F.D. Celstica Inc.	Pearson Correlation	.(a)	- 0.031	.(a)	.(a)	- 0.028	- 0.019	- 0.014	- 0.061	- 0.024	- 0.040	- 0.019	- 0.014	- 0.028	-0.024	- 0.014	- 0.019	- 0.031	- 0.019	- 0.061	- 0.019	- 0.019	- 0.014
	Sig. (2-tailed)	.	0.678	.	.	0.711	0.794	0.854	0.412	0.749	0.596	0.794	0.854	0.711	0.749	0.854	0.794	0.678	0.794	0.412	0.794	0.794	0.854
F.D. CHC helicopter corp.	Pearson Correlation	.(a)	- 0.022	.(a)	.(a)	- 0.019	- 0.014	- 0.010	- 0.043	- 0.017	- 0.028	- 0.014	- 0.010	- 0.019	-0.017	- 0.010	- 0.014	- 0.022	- 0.014	- 0.043	- 0.014	- 0.014	- 0.010
	Sig. (2-tailed)	.	0.771	.	.	0.795	0.855	0.897	0.565	0.822	0.710	0.855	0.897	0.795	0.822	0.897	0.855	0.771	0.855	0.565	0.855	0.855	0.897
F.D. Dorel Industries Inc.	Pearson Correlation	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
F.D. Magna International Inc.	Pearson Correlation	.(a)	- 0.012	.(a)	.(a)	- 0.011	- 0.008	- 0.006	- 0.025	- 0.010	- 0.016	- 0.008	- 0.006	- 0.011	-0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)	.	0.867	.	.	0.881	0.916	0.941	0.741	0.897	0.831	0.916	0.941	0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Manulife finance co.	Pearson Correlation	.(a)	- 0.012	.(a)	.(a)	- 0.011	- 0.008	- 0.006	- 0.025	- 0.010	- 0.016	- 0.008	- 0.006	- 0.011	-0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)	.	0.867	.	.	0.881	0.916	0.941	0.741	0.897	0.831	0.916	0.941	0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Nortel networks corp.	Pearson Correlation	.(a)	- 0.056	.(a)	.(a)	- 0.050	- 0.035	- 0.025	- 0.110	- 0.043	- 0.071	- 0.035	- 0.025	- 0.050	-0.043	- 0.025	- 0.035	- 0.056	- 0.035	- 0.110	- 0.035	- 0.035	-0.025
	Sig. (2-tailed)	.	0.455	.	.	0.506	0.640	0.741	0.140	0.565	0.341	0.640	0.741	0.506	0.565	0.741	0.640	0.455	0.640	0.140	0.640	0.640	0.741
F.D. Nova Chemicals Corp.	Pearson Correlation	.(a)	- 0.018	.(a)	.(a)	- 0.016	- 0.011	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	-0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-	.	0.812	.	.	0.832	0.882	0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Quebecor inc.	Pearson Correlation	.(a)	- 0.049	.(a)	.(a)	- 0.043	- 0.030	- 0.021	- 0.096	- 0.037	- 0.062	- 0.030	- 0.021	- 0.043	-0.037	- 0.021	- 0.030	- 0.049	- 0.030	- 0.096	- 0.030	- 0.030	- 0.021
	Sig. (2-tailed)	.	0.515	.	.	0.562	0.683	0.774	0.199	0.616	0.406	0.683	0.774	0.562	0.616	0.774	0.683	0.515	0.683	0.199	0.683	0.683	0.774
F.D.Royal Bank of Canada	Pearson Correlation	.(a)	- 0.038	.(a)	.(a)	- 0.034	- 0.024	- 0.017	- 0.076	- 0.030	- 0.049	- 0.024	- 0.017	- 0.034	-0.030	- 0.017	- 0.024	- 0.038	- 0.024	- 0.076	- 0.024	- 0.024	- 0.017
	Sig. (2-tailed)	.	0.607	.	.	0.647	0.747	0.820	0.311	0.692	0.512	0.747	0.820	0.647	0.692	0.820	0.747	0.607	0.747	0.311	0.747	0.747	0.820
F.D. Saputo Inc.	Pearson Correlation	.(a)	- 0.038	.(a)	.(a)	- 0.034	- 0.024	- 0.017	- 0.076	- 0.030	- 0.049	- 0.024	- 0.017	- 0.034	-0.030	- 0.017	- 0.024	- 0.038	- 0.024	- 0.076	- 0.024	- 0.024	- 0.017
	Sig. (2-tailed)	.	0.607	.	.	0.647	0.747	0.820	0.311	0.692	0.512	0.747	0.820	0.647	0.692	0.820	0.747	0.607	0.747	0.311	0.747	0.747	0.820
F.D. Sun Life Financial Inc.	Pearson Correlation	.(a)	- 0.018	.(a)	.(a)	- 0.016	- 0.011	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	-0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)	.	0.812	.	.	0.832	0.882	0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Allianz	Pearson Correlation	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

		F.D. Allianz	F.D. Bayer	F.D. Beiersdorf	F.D. BMW	F.D. Commerzbank	F.D. Daimler Chrysler AG	F.D. Degussa AG	F.D. Deutsche Bank	F.D. Deutsche Post	F.D. Deutsche Telekom	F.D. E.ON AG	F.D. Heidelberg	F.D. Henkel	F.D. Karstadtquelle AG	F.D. Linde AG	F.D. MAN AG	F.D. Pixelpark AG	F.D. Schering	F.D. Siemens	F.D. Thyssenkrupp AG	F.D. TUI AG	F.D. VW AG
F.D. Bayer	Pearson Correlation		1	.(a)	.(a)	- 0.025	- 0.018	- 0.012	- 0.056	- 0.022	- 0.036	- 0.018	- 0.012	- 0.025	-0.022	- 0.012	- 0.018	- 0.028	- 0.018	- 0.056	- 0.018	- 0.018	- 0.012
	Sig. (2-tailed)			.	.	0.736	0.812	0.867	0.455	0.771	0.629	0.812	0.867	0.736	0.771	0.867	0.812	0.705	0.812	0.455	0.812	0.812	0.867
F.D. Beiersdorf	Pearson Correlation			.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)				.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
F.D. BMW	Pearson Correlation				.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)					.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
F.D. Commerzbank	Pearson Correlation					1	- 0.016	- 0.011	- 0.050	- 0.019	- 0.032	- 0.016	- 0.011	- 0.022	-0.019	- 0.011	- 0.016	- 0.025	- 0.016	- 0.050	- 0.016	- 0.016	- 0.011
	Sig. (2-tailed)						0.832	0.881	0.506	0.795	0.667	0.832	0.881	0.763	0.795	0.881	0.832	0.736	0.832	0.506	0.832	0.832	0.881
F.D. DaimlerChrysler AG	Pearson Correlation						1	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	-0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)							0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Degussa AG	Pearson Correlation							1	- 0.025	- 0.010	- 0.016	- 0.008	- 0.006	- 0.011	-0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)								0.741	0.897	0.831	0.916	0.941	0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Deutsche Bank	Pearson Correlation								1	- 0.043	- 0.071	- 0.035	- 0.025	- 0.050	-0.043	- 0.025	- 0.035	- 0.056	- 0.035	- 0.110	- 0.035	- 0.035	- 0.025
	Sig. (2-tailed)									0.565	0.341	0.640	0.741	0.506	0.565	0.741	0.640	0.455	0.640	0.140	0.640	0.640	0.741
F.D. Deutsche Post	Pearson Correlation									1	- 0.028	- 0.014	- 0.010	- 0.019	-0.017	- 0.010	- 0.014	- 0.022	- 0.014	- 0.043	- 0.014	- 0.014	- 0.010
	Sig. (2-tailed)										0.710	0.855	0.897	0.795	0.822	0.897	0.855	0.771	0.855	0.565	0.855	0.855	0.897
F.D. Deutsche Telekom	Pearson Correlation										1	- 0.023	- 0.016	- 0.032	-0.028	- 0.016	- 0.023	- 0.036	- 0.023	- 0.071	- 0.023	- 0.023	- 0.016
	Sig. (2-tailed)											0.762	0.831	0.667	0.710	0.831	0.762	0.629	0.762	0.341	0.762	0.762	0.831
F.D. E.ON AG	Pearson Correlation											1	- 0.008	- 0.016	-0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)												0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Heidelberg	Pearson Correlation												1	- 0.011	-0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)													0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Henkel	Pearson Correlation													1	-0.019	-0.011	- 0.016	- 0.025	- 0.016	- 0.050	- 0.016	- 0.016	- 0.011
	Sig. (2-tailed)														0.795	0.881	0.832	0.736	0.832	0.506	0.832	0.832	0.881
F.D. Karstadtquelle AG	Pearson Correlation														1	- 0.010	- 0.014	- 0.022	- 0.014	- 0.043	- 0.014	- 0.014	- 0.010
	Sig. (2-tailed)															0.897	0.855	0.771	0.855	0.565	0.855	0.855	0.897
F.D. Linde AG	Pearson Correlation															1	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)																0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. MAN AG	Pearson Correlation																1	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)																	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Pixelpark AG	Pearson Correlation																	1	- 0.018	- 0.056	- 0.018	- 0.018	- 0.012
	Sig. (2-tailed)																		0.812	0.455	0.812	0.812	0.867
F.D. Schering	Pearson Correlation																		1	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)																			0.640	0.882	0.882	0.916
F.D. Siemens	Pearson Correlation																			1	- 0.035	- 0.035	- 0.025
	Sig. (2-tailed)																				0.640	0.640	0.741
F.D. Thyssenkrupp AG	Pearson Correlation																				1	- 0.011	- 0.008
	Sig. (2-tailed)																					0.882	0.916
F.D. TUI AG	Pearson Correlation																					1	- 0.008
	Sig. (2-tailed)																						0.916
F.D. VW AG (=Volkswagen)	Pearson Correlation																						1
	Sig. (2-tailed)																						

N = 182

Appendix 5.2.4 DUMMY CONTROL VARIABLES HYPOTHESIS 4 AND ADDITIONAL ANALYSIS HYPOTHESIS 3

Table A.5.2.4.1 Cross-check dummy on grouped dummy control variables hp 4 and additional analysis hp 3 (*Performance average for the 3 years following layoffs)*

Control variable	***R^2***	***Adj. R^2***	***F- value***
• *ROE*			
Firm specific effect	0.763	0.712	14.992***
Industry specific effect (2 digits)	0.446	0.396	8.922***
Industry specific effect (1 digit)	0.300	0.276	12.516***
• *ROA*			
Firm specific effect	0.794	0.750	17.983***
Industry specific effect (2 digits)	0.345	0.285	5.820***
Industry specific effect (1 digit)	0.255	0.230	10.007***
• *Tobin's Q 1)*			
Firm specific effect	0.924	0.907	56.474***
Industry specific effect (2 digits)	0.855	0.842	65.402***
Industry specific effect (1 digit)	0.135	0.105	4.537***
• *Tobin's Q 2)*			
Firm specific effect	0.916	0.898	50.682***
Industry specific effect (2 digits)	0.860	0.847	67.965
Industry specific effect (1 digit)	0.133	0.104	4.485***

LEGENDA:

***. Correlation is significant at the 0.001 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

†. Correlation is significant at the 0.1 level (2-tailed).

Table A.5.2.4.2 Firm specific effect correlation matrix for hypothesis 4 and additional analysis hypothesis 3 (*Performance average for the 3 years following layoffs [M_{t+3}])*

		ROE postL average 3	ROA postL average 3	1) T'S Q postL average 3	2) T'S Q postL average 3	F.D. Agrium inc.	F.D. ATS Automation Tooling Systems Inc	F.D.Bombardier Inc.	F.D.CAE Inc.	F.D. Celstica Inc.	F.D. CHC helicopter corp.	F.D. Dorel Industries Inc.	F.D. Magna International Inc.	F.D. Manulife finance co.	F.D. Nortel networks corp.	F.D. Nova Chemicals Corp.	F.D. Quebecor inc.	F.D.Royal Bank of Canada	F.D. Saputo Inc.	F.D. Sun Life Financial Inc.
ROE postL average 3	Pearson Correlation	1	0.884	- 0.147	- 0.046	0.090	- 0.008	0.057	0.029	- 0.046	0.064	.(a)	0.032	0.032	- 0.538	- 0.030	0.045	0.113	0.126	0.110
	Sig. (2-tailed)		0.000	0.048	0.540	0.229	0.916	0.445	0.698	0.539	0.393	.	0.670	0.667	0.000	0.683	0.547	0.128	0.090	0.140
ROA postL average 3	Pearson Correlation		1	- 0.105	0.001	0.077	- 0.034	0.033	0.014	- 0.084	0.045	.(a)	0.040	0.010	- 0.289	- 0.003	0.030	0.030	0.160	0.283
	Sig. (2-tailed)			0.156	0.988	0.303	0.646	0.657	0.856	0.259	0.542	.	0.591	0.889	0.000	0.970	0.691	0.683	0.031	0.000
1) T'S Q postL average 3	Pearson Correlation			1	0.953	0.026	0.837	- 0.035	0.086	- 0.088	- 0.049	.(a)	- 0.034	- 0.043	0.131	- 0.026	- 0.167	- 0.185	0.104	-0.064
	Sig. (2-tailed)				0.000	0.729	0.000	0.639	0.250	0.239	0.509	.	0.652	0.564	0.077	0.724	0.024	0.013	0.164	0.388
2) T'S Q postL average 3	Pearson Correlation				1	0.117	0.813	- 0.019	0.144	- 0.042	0.017	.(a)	- 0.009	- 0.060	0.090	0.024	- 0.076	- 0.171	0.236	- 0.087
	Sig. (2-tailed)					0.114	0.000	0.800	0.053	0.570	0.823	.	0.900	0.419	0.228	0.752	0.307	0.021	0.001	0.241
F.D. Agrium inc.	Pearson Correlation					1	- 0.024	- 0.066	-0.049	- 0.042	- 0.030	.(a)	- 0.017	- 0.017	- 0.076	- 0.024	- 0.066	- 0.052	- 0.052	- 0.024
	Sig. (2-tailed)						0.747	0.377	0.512	0.572	0.692	.	0.820	0.820	0.311	0.747	0.377	0.486	0.486	0.747
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation						1	- 0.030	-0.023	- 0.019	- 0.014	.(a)	- 0.008	- 0.008	- 0.035	- 0.011	- 0.030	- 0.024	- 0.024	- 0.011
	Sig. (2-tailed)							0.683	0.762	0.794	0.855	.	0.916	0.916	0.640	0.882	0.683	0.747	0.747	0.882
F.D.Bombardier Inc.	Pearson Correlation							1	-0.062	- 0.053	- 0.037	.(a)	- 0.021	- 0.021	- 0.096	- 0.030	- 0.083	- 0.066	- 0.066	- 0.030
	Sig. (2-tailed)								0.406	0.475	0.616	.	0.774	0.774	0.199	0.683	0.263	0.377	0.377	0.683
F.D.CAE Inc.	Pearson Correlation								1	- 0.040	- 0.028	.(a)	- 0.016	- 0.016	- 0.071	- 0.023	- 0.062	- 0.049	- 0.049	- 0.023
	Sig. (2-tailed)									0.596	0.710	.	0.831	0.831	0.341	0.762	0.406	0.512	0.512	0.762
F.D. Celstica Inc.	Pearson Correlation									1	- 0.024	.(a)	- 0.014	- 0.014	- 0.061	- 0.019	- 0.053	- 0.042	- 0.042	- 0.019
	Sig. (2-tailed)										0.749	.	0.854	0.854	0.412	0.794	0.475	0.572	0.572	0.794
F.D. CHC helicopter corp.	Pearson Correlation										1	.(a)	- 0.010	- 0.010	- 0.043	- 0.014	- 0.037	- 0.030	- 0.030	- 0.014
	Sig. (2-tailed)											.	0.897	0.897	0.565	0.855	0.616	0.692	0.692	0.855
F.D. Dorel Industries Inc.	Pearson Correlation											.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)						.	.	.	.	.		.	.	.	.	.	.	.	.
F.D. Magna International Inc.	Pearson Correlation												1	- 0.006	- 0.025	- 0.008	- 0.021	- 0.017	- 0.017	- 0.008
	Sig. (2-tailed)													0.941	0.741	0.916	0.774	0.820	0.820	0.916
F.D.Royal Bank of Canada	Pearson Correlation																	1	- 0.052	- 0.024
	Sig. (2-tailed)																		0.486	0.747
F.D. Saputo Inc.	Pearson Correlation																		1	- 0.024
	Sig. (2-tailed)																			0.747
F.D. Sun Life Financial Inc.	Pearson Correlation																			1
	Sig. (2-tailed)																			

Table A.5.2.4.2 Firm specific effect correlation matrix for hp 4 and additional analysis hp 3 (*Performance average for the 3 years following layoffs [M_{t+3}]*) (continues)

		F.D. Allianz	F.D. Bayer	F.D. Beiersdorf	F.D. BMW	F.D. Commerzbank	F.D. Daimler Chrysler AG	F.D. Degussa AG	F.D. Deutsche Bank	F.D. Deutsche Post	F.D. Deutsche Telekom	F.D. E.ON AG	F.D. Heidelberg	F.D. Henkel	F.D. Karstadtquelle AG	F.D. Linde AG	F.D. MAN AG	F.D. Pixelpark AG	F.D. Schering	F.D. Siemens	F.D. Thyssenkrupp AG	F.D. TUI AG	F.D. VW AG (=Volkswagen)
ROE postL average 3	Pearson Correlation	.(a)	0.053	.(a)	.(a)	0.025	0.038	0.003	0.108	0.056	0.063	0.040	0.005	0.054	- 0.094	0.023	0.026	- 0.657	0.045	0.110	0.033	0.047	0.017
	Sig. (2-tailed)	.	0.481	.	.	0.737	0.613	0.973	0.148	0.453	0.395	0.592	0.947	0.470	0.207	0.758	0.729	0.000	0.545	0.138	0.657	0.532	0.823
ROA postL average 3	Pearson Correlation	.(a)	0.045	.(a)	.(a)	0.023	0.026	0.002	0.058	0.025	0.057	0.038	0.003	0.051	0.011	0.020	0.021	- 0.845	0.054	0.095	0.025	0.032	0.013
	Sig. (2-tailed)	.	0.542	.	.	0.757	0.730	0.979	0.435	0.742	0.444	0.609	0.973	0.493	0.880	0.788	0.782	0.000	0.468	0.202	0.735	0.666	0.862
1) T'S Q postL average 3	Pearson Correlation	.(a)	- 0.009	.(a)	.(a)	- 0.105	- 0.050	0.011	- 0.213	- 0.067	- 0.014	- 0.008	- 0.011	0.067	- 0.041	- 0.006	- 0.049	0.030	0.162	0.076	- 0.037	- 0.038	- 0.040
	Sig. (2-tailed)	.	0.902	.	.	0.158	0.503	0.888	0.004	0.367	0.853	0.913	0.879	0.372	0.579	0.933	0.508	0.686	0.028	0.307	0.620	0.613	0.589
2) T'S Q postL average 3	Pearson Correlation	.(a)	- 0.032	.(a)	.(a)	- 0.083	- 0.041	- 0.004	- 0.252	- 0.069	- 0.006	- 0.045	- 0.008	0.027	- 0.083	- 0.014	- 0.079	- 0.134	0.096	- 0.054	- 0.062	- 0.041	- 0.031
	Sig. (2-tailed)	.	0.669	.	.	0.263	0.587	0.957	0.001	0.353	0.932	0.542	0.911	0.713	0.262	0.847	0.288	0.071	0.196	0.473	0.405	0.586	0.674
F.D. Agrium inc.	Pearson Correlation	.(a)	- 0.038	.(a)	.(a)	- 0.034	- 0.024	- 0.017	- 0.076	- 0.030	- 0.049	- 0.024	- 0.017	- 0.034	- 0.030	- 0.017	- 0.024	- 0.038	- 0.024	- 0.076	- 0.024	- 0.024	- 0.017
	Sig. (2-tailed)	.	0.607	.	.	0.647	0.747	0.820	0.311	0.692	0.512	0.747	0.820	0.647	0.692	0.820	0.747	0.607	0.747	0.311	0.747	0.747	0.820
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation	.(a)	- 0.018	.(a)	.(a)	- 0.016	- 0.011	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	- 0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)	.	0.812	.	.	0.832	0.882	0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D.Bombardier Inc.	Pearson Correlation	.(a)	- 0.049	.(a)	.(a)	- 0.043	- 0.030	- 0.021	- 0.096	- 0.037	- 0.062	- 0.030	- 0.021	- 0.043	- 0.037	- 0.021	- 0.030	- 0.049	- 0.030	- 0.096	- 0.030	- 0.030	- 0.021
	Sig. (2-tailed)	.	0.515	.	.	0.562	0.683	0.774	0.199	0.616	0.406	0.683	0.774	0.562	0.616	0.774	0.683	0.515	0.683	0.199	0.683	0.683	0.774
F.D.CAE Inc.	Pearson Correlation	.(a)	- 0.036	.(a)	.(a)	- 0.032	- 0.023	- 0.016	- 0.071	- 0.028	- 0.046	- 0.023	- 0.016	- 0.032	- 0.028	- 0.016	- 0.023	- 0.036	- 0.023	- 0.071	- 0.023	- 0.023	- 0.016
	Sig. (2-tailed)	.	0.629	.	.	0.667	0.762	0.831	0.341	0.710	0.538	0.762	0.831	0.667	0.710	0.831	0.762	0.629	0.762	0.341	0.762	0.762	0.831
F.D. Celstica Inc.	Pearson Correlation	.(a)	- 0.031	.(a)	.(a)	- 0.028	- 0.019	- 0.014	- 0.061	- 0.024	- 0.040	- 0.019	- 0.014	- 0.028	- 0.024	- 0.014	- 0.019	- 0.031	- 0.019	- 0.061	- 0.019	- 0.019	- 0.014
	Sig. (2-tailed)	.	0.678	.	.	0.711	0.794	0.854	0.412	0.749	0.596	0.794	0.854	0.711	0.749	0.854	0.794	0.678	0.794	0.412	0.794	0.794	0.854
F.D. CHC helicopter corp.	Pearson Correlation	.(a)	- 0.022	.(a)	.(a)	- 0.019	- 0.014	- 0.010	- 0.043	- 0.017	- 0.028	- 0.014	- 0.010	- 0.019	- 0.017	- 0.010	- 0.014	- 0.022	- 0.014	- 0.043	- 0.014	- 0.014	- 0.010
	Sig. (2-tailed)	.	0.771	.	.	0.795	0.855	0.897	0.565	0.822	0.710	0.855	0.897	0.795	0.822	0.897	0.855	0.771	0.855	0.565	0.855	0.855	0.897
F.D. Dorel Industries Inc.	Pearson Correlation	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
F.D. Magna International Inc.	Pearson Correlation	.(a)	- 0.012	.(a)	.(a)	- 0.011	- 0.008	- 0.006	- 0.025	- 0.010	- 0.016	- 0.008	- 0.006	- 0.011	- 0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)	.	0.867	.	.	0.881	0.916	0.941	0.741	0.897	0.831	0.916	0.941	0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Manulife finance co.	Pearson Correlation	.(a)	- 0.012	.(a)	.(a)	- 0.011	- 0.008	- 0.006	- 0.025	- 0.010	- 0.016	- 0.008	- 0.006	- 0.011	- 0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)	.	0.867	.	.	0.881	0.916	0.941	0.741	0.897	0.831	0.916	0.941	0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Nortel networks corp.	Pearson Correlation	.(a)	- 0.056	.(a)	.(a)	- 0.050	- 0.035	- 0.025	- 0.110	- 0.043	- 0.071	- 0.035	- 0.025	- 0.050	- 0.043	- 0.025	- 0.035	- 0.056	- 0.035	- 0.110	- 0.035	- 0.035	- 0.025
	Sig. (2-tailed)	.	0.455	.	.	0.506	0.640	0.741	0.140	0.565	0.341	0.640	0.741	0.506	0.565	0.741	0.640	0.455	0.640	0.140	0.640	0.640	0.741
F.D. Nova Chemicals Corp.	Pearson Correlation	.(a)	- 0.018	.(a)	.(a)	- 0.016	- 0.011	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	- 0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)	.	0.812	.	.	0.832	0.882	0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Quebecor inc.	Pearson Correlation	.(a)	- 0.049	.(a)	.(a)	- 0.043	- 0.030	- 0.021	- 0.096	- 0.037	- 0.062	- 0.030	- 0.021	- 0.043	- 0.037	- 0.021	- 0.030	- 0.049	- 0.030	- 0.096	- 0.030	- 0.030	- 0.021
	Sig. (2-tailed)	.	0.515	.	.	0.562	0.683	0.774	0.199	0.616	0.406	0.683	0.774	0.562	0.616	0.774	0.683	0.515	0.683	0.199	0.683	0.683	0.774

		F.D. Allianz	F.D. Bayer	F.D. Beiersdorf	F.D. BMW	F.D. Commerzbank	F.D. Daimler Chrysler AG	F.D. Degussa AG	F.D. Deutsche Bank	F.D. Deutsche Post	F.D. Deutsche Telekom	F.D. E.ON AG	F.D. Heidelberg	F.D. Henkel	F.D. Karstadtquelle AG	F.D. Linde AG	F.D. MAN AG	F.D. Pixelpark AG	F.D. Schering	F.D. Siemens	F.D. Thyssenkrupp AG	F.D. TUI AG	F.D. VW AG (=Volkswagen)
F.D.Royal Bank of Canada	Pearson Correlation	.(a)	- 0.038	.(a)	.(a)	- 0.034	- 0.024	- 0.017	- 0.076	- 0.030	- 0.049	- 0.024	- 0.017	- 0.034	- 0.030	- 0.017	- 0.024	- 0.038	- 0.024	- 0.076	- 0.024	- 0.024	- 0.017
	Sig. (2-tailed)	.	0.607	.	.	0.647	0.747	0.820	0.311	0.692	0.512	0.747	0.820	0.647	0.692	0.820	0.747	0.607	0.747	0.311	0.747	0.747	0.820
F.D. Saputo Inc.	Pearson Correlation	.(a)	- 0.038	.(a)	.(a)	- 0.034	- 0.024	- 0.017	- 0.076	- 0.030	- 0.049	- 0.024	- 0.017	- 0.034	- 0.030	- 0.017	- 0.024	- 0.038	- 0.024	- 0.076	- 0.024	- 0.024	- 0.017
	Sig. (2-tailed)	.	0.607	.	.	0.647	0.747	0.820	0.311	0.692	0.512	0.747	0.820	0.647	0.692	0.820	0.747	0.607	0.747	0.311	0.747	0.747	0.820
F.D. Sun Life Financial Inc.	Pearson Correlation	.(a)	- 0.018	.(a)	.(a)	- 0.016	- 0.011	- 0.008	- 0.035	-0.014	- 0.023	- 0.011	- 0.008	- 0.016	- 0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)	.	0.812	.	.	0.832	0.882	0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Allianz	Pearson Correlation	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
F.D. Bayer	Pearson Correlation		1	.(a)	.(a)	- 0.025	- 0.018	- 0.012	- 0.056	- 0.022	- 0.036	- 0.018	- 0.012	- 0.025	- 0.022	- 0.012	- 0.018	- 0.028	- 0.018	- 0.056	- 0.018	- 0.018	- 0.012
	Sig. (2-tailed)			.	.	0.736	0.812	0.867	0.455	0.771	0.629	0.812	0.867	0.736	0.771	0.867	0.812	0.705	0.812	0.455	0.812	0.812	0.867
F.D. Beiersdorf	Pearson Correlation			.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)				.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
F.D. BMW	Pearson Correlation				.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)	.(a)
	Sig. (2-tailed)					.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
F.D. Commerzbank	Pearson Correlation					1	- 0.016	- 0.011	- 0.050	- 0.019	- 0.032	- 0.016	- 0.011	- 0.022	- 0.019	- 0.011	- 0.016	- 0.025	- 0.016	- 0.050	- 0.016	- 0.016	- 0.011
	Sig. (2-tailed)						0.832	0.881	0.506	0.795	0.667	0.832	0.881	0.763	0.795	0.881	0.832	0.736	0.832	0.506	0.832	0.832	0.881
F.D. DaimlerChrysler AG	Pearson Correlation						1	- 0.008	- 0.035	- 0.014	- 0.023	- 0.011	- 0.008	- 0.016	- 0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)							0.916	0.640	0.855	0.762	0.882	0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Degussa AG	Pearson Correlation							1	- 0.025	- 0.010	- 0.016	- 0.008	- 0.006	- 0.011	- 0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)								0.741	0.897	0.831	0.916	0.941	0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Deutsche Bank	Pearson Correlation								1	- 0.043	- 0.071	- 0.035	- 0.025	- 0.050	- 0.043	- 0.025	- 0.035	- 0.056	- 0.035	- 0.110	- 0.035	- 0.035	- 0.025
	Sig. (2-tailed)									0.565	0.341	0.640	0.741	0.506	0.565	0.741	0.640	0.455	0.640	0.140	0.640	0.640	0.741
F.D. Deutsche Post	Pearson Correlation									1	- 0.028	- 0.014	- 0.010	- 0.019	- 0.017	- 0.010	- 0.014	- 0.022	- 0.014	- 0.043	- 0.014	- 0.014	- 0.010
	Sig. (2-tailed)										0.710	0.855	0.897	0.795	0.822	0.897	0.855	0.771	0.855	0.565	0.855	0.855	0.897
F.D. Deutsche Telekom	Pearson Correlation										1	- 0.023	- 0.016	- 0.032	- 0.028	- 0.016	- 0.023	- 0.036	- 0.023	- 0.071	- 0.023	- 0.023	- 0.016
	Sig. (2-tailed)											0.762	0.831	0.667	0.710	0.831	0.762	0.629	0.762	0.341	0.762	0.762	0.831
F.D. Deutsche Telekom	Pearson Correlation											1	- 0.023	- 0.016	- 0.032	- 0.028	- 0.016	- 0.023	- 0.036	- 0.023	- 0.071	- 0.023	- 0.023	- 0.016
	Sig. (2-tailed)												0.762	0.831	0.667	0.710	0.831	0.762	0.629	0.762	0.341	0.762	0.762	0.831
F.D. E.ON AG	Pearson Correlation												1	- 0.008	- 0.016	- 0.014	- 0.008	- 0.011	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)													0.916	0.832	0.855	0.916	0.882	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Heidelberg	Pearson Correlation													1	- 0.011	- 0.010	- 0.006	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)														0.881	0.897	0.941	0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. Henkel	Pearson Correlation														1	- 0.019	- 0.011	- 0.016	- 0.025	- 0.016	- 0.050	- 0.016	- 0.016	- 0.011
	Sig. (2-tailed)															0.795	0.881	0.832	0.736	0.832	0.506	0.832	0.832	0.881

		F.D. Allianz	F.D. Bayer	F.D. Beiersdorf	F.D. BMW	F.D. Commerzbank	F.D. Daimler Chrysler AG	F.D. Degussa AG	F.D. Deutsche Bank	F.D. Deutsche Post	F.D. Deutsche Telekom	F.D. E.ON AG	F.D. Heidelberg	F.D. Henkel	F.D. Karstadtquelle AG	F.D. Linde AG	F.D. MAN AG	F.D. Pixelpark AG	F.D. Schering	F.D. Siemens	F.D. Thyssenkrupp AG	F.D. TUI AG	F.D. VW AG (=Volkswagen)
F.D. Karstadtquelle AG	Pearson Correlation														1	- 0.010	- 0.014	- 0.022	- 0.014	- 0.043	- 0.014	- 0.014	- 0.010
	Sig. (2-tailed)															0.897	0.855	0.771	0.855	0.565	0.855	0.855	0.897
F.D. Linde AG	Pearson Correlation															1	- 0.008	- 0.012	- 0.008	- 0.025	- 0.008	- 0.008	- 0.006
	Sig. (2-tailed)																0.916	0.867	0.916	0.741	0.916	0.916	0.941
F.D. MAN AG	Pearson Correlation																1	- 0.018	- 0.011	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)																	0.812	0.882	0.640	0.882	0.882	0.916
F.D. Pixelpark AG	Pearson Correlation																	1	- 0.018	- 0.056	- 0.018	- 0.018	- 0.012
	Sig. (2-tailed)																		0.812	0.455	0.812	0.812	0.867
F.D. Schering	Pearson Correlation																		1	- 0.035	- 0.011	- 0.011	- 0.008
	Sig. (2-tailed)																			0.640	0.882	0.882	0.916
F.D. Siemens	Pearson Correlation																			1	- 0.035	- 0.035	- 0.025
	Sig. (2-tailed)																				0.640	0.640	0.741
F.D. Thyssenkrupp AG	Pearson Correlation																				1	- 0.011	- 0.008
	Sig. (2-tailed)																					0.882	0.916
F.D. TUI AG	Pearson Correlation																					1	- 0.008
	Sig. (2-tailed)																						0.916
F.D. VW AG (=Volkswagen)	Pearson Correlation																						1
	Sig. (2-tailed)																						

N = 182

LEGENDA (applies to all correlation matrices tables of appendix 5.2)

a. Cannot be computed because at least one of the variables is constant.

Appendix 5.3 Pearson correlation for all models

This appendix contains the correlation matrices for all control variables considered for this study, together with the dependent variables. The appendix is divided into four sections, according to the different hypotheses and the relative variables associated.

Appendix 5.3.1 PEARSON CORRELATION FOR REGRESSION MODELS HYPOTHESES 1 AND 2

Table A.5.3.1 Pearson correlation for regression models hypotheses 1 and 2

LOGARITHM ABSOLUTE NUMBER OF EMPLOYEES LAID OFF		Log absolute number layoff	F.D. Agrium inc.	F.D. CHC helicopter corp.	F.D. Royal Bank of Canada	F.D. Saputo Inc.	F.D. DaimlerChrysler AG	F.D. Deutsche Bank	F.D. Deutsche telekom	F.D. Pixelpark AG	Geographic region effect	Firm geographic dispersion	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	ROE t	ROA t	FS t-1	FS (LN) t-1	dummy home-abroad	Geographic Distance
Log absolute number layoff	Pearson Correlation	1	-,250 (**)	-,130	-,266 (**)	-,182 (**)	,240 (**)	,195(**)	,241(**)	-,193(**)	,347(**)	,197(**)	-,239(**)	-,278(**)	,081	-,041	,183(**)	,104	,340(**)	,254(**)	-,207(**)	-,096
	Sig. (2-tailed)		,000	,063	,000	,009	,001	,005	,001	,006	,000	,005	,001	,000	,247	,560	,009	,136	,000	,000	,003	,170
F.D. Agrium inc.	Pearson Correlation		1	-,022	-,051	-,059	-,022	-,070	-,046	-,036	-,198(**)	-,187(**)	,107	,203(**)	,020	,041	,047	,053	-,246(**)	-,177(*)	-,028	-,039
	Sig. (2-tailed)			,749	,465	,401	,749	,317	,516	,610	,004	,007	,125	,003	,774	,557	,506	,453	,000	,011	,691	,581
F.D. CHC helicopter corp.	Pearson Correlation			1	-,022	-,026	-,010	-,038	-,025	-,016	-,087	-,074	-,073	,036	,003	-,025	,019	,016	-,078	-,050	-,033	,035
	Sig. (2-tailed)				,749	,713	,888	,590	,727	,823	,215	,293	,298	,604	,968	,717	,786	,815	,268	,474	,637	,622
F.D.Royal Bank of Canada	Pearson Correlation				1	-,059	-,022	-,070	-,046	-,036	-,198(**)	-,063	,062	,228(**)	-,195(**)	,065	,056	,049	,276(**)	,200(**)	,163(*)	,180(**)
	Sig. (2-tailed)					,401	,749	,317	,516	,610	,004	,369	,379	,001	,005	,353	,427	,488	,000	,004	,019	,010
F.D. Saputo Inc.	Pearson Correlation					1	-,026	-,081	-,052	-,041	-,228(**)	-,215(**)	,065	,140(*)	,176(*)	,118	,067	,136	-,299(**)	-,218(**)	,187(**)	-,178(*)
	Sig. (2-tailed)						,713	,250	,455	,558	,001	,002	,353	,045	,012	,091	,340	,052	,000	,002	,007	,011
F.D. DaimlerChrysler AG	Pearson Correlation						1	-,031	-,020	-,016	,113	-,051	-,078	-,036	,053	,117	,019	,017	,099	,075	-,033	,026
	Sig. (2-tailed)							,661	,776	,823	,106	,464	,265	,606	,446	,094	,785	,805	,156	,284	,637	,709
F.D. Deutsche Bank	Pearson Correlation							1	-,063	-,049	,354(**)	,142(*)	,022	-,201(**)	-,057	-,026	,067	,062	,516(**)	,349(**)	,078	,040
	Sig. (2-tailed)								,373	,485	,000	,043	,750	,004	,419	,708	,342	,374	,000	,000	,266	,568
F.D. Deutsche telekom	Pearson Correlation								1	-,032	,230(**)	-,104	,031	-,192(**)	-,120	-,236(**)	,030	,008	,160(*)	,128	-,014	-,071
	Sig. (2-tailed)									,650	,001	,136	,664	,006	,086	,001	,674	,907	,022	,068	,839	,310
F.D. Pixelpark AG	Pearson Correlation									1	,181(**)	-,105	-,055	-,058	,103	,187(**)	-,953(**)	-,599(**)	-,373(**)	-,356(**)	,047	-,022
	Sig. (2-tailed)										,010	,135	,436	,412	,140	,007	,000	,000	,000	,000	,502	,753
Geographic region effect	Pearson Correlation										1	,517(**)	-,235(**)	-,713(**)	-,237(**)	-,254(**)	-,135	,013	,452(**)	,332(**)	,070	-,026
	Sig. (2-tailed)											,000	,001	,000	,001	,000	,054	,858	,000	,000	,316	,712

LOGARITHM ABSOLUTE NUMBER OF EMPLOYEES LAID OFF		Log absolute number layoff	F.D. Agrium inc.	F.D. CHC helicopter corp.	F.D.Royal Bank of Canada	F.D. Saputo Inc.	F.D. DaimlerChrysler AG	F.D. Deutsche Bank	F.D. Deutsche telekom	F.D. Pixelpark AG	Geographic region effect	Firm geographic dispersion	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	ROE t	ROA t	FS t-1	FS (LN) t-1	dummy home-abroad	Geographic Distance
Firm geographic dispersion	Pearson Correlation											1	-,187(**)	-,467(**)	-,229(**)	-,284(**)	,103	,047	,430(**)	,348(**)	,067	,037
	Sig. (2-tailed)												,007	,000	,001	,000	,142	,503	,000	,000	,341	,596
TARGET gdp growth	Pearson Correlation												1	,514(**)	,196(**)	,049	,070	,076	-,086	-,054	,086	,147(*)
	Sig. (2-tailed)													,000	,005	,484	,316	,281	,219	,439	,221	,035
HOME gdp growth	Pearson Correlation													1	,254(**)	,403(**)	,061	,037	-,340(**)	-,268(**)	-,096	,074
	Sig. (2-tailed)														,000	,000	,386	,595	,000	,000	,169	,291
TARGET output gap	Pearson Correlation														1	,610(**)	-,119	-,119	-,164(*)	-,105	-,028	-,201(**)
	Sig. (2-tailed)															,000	,089	,088	,019	,135	,689	,004
HOME output gap	Pearson Correlation															1	-,183(**)	-,152(*)	-,111	-,112	,093	,030
	Sig. (2-tailed)																,009	,029	,112	,111	,185	,674
ROE t	Pearson Correlation																1	,805(**)	,345(**)	,326(**)	-,037	-,010
	Sig. (2-tailed)																	,000	,000	,000	,593	,892
ROA t	Pearson Correlation																	1	,155(*)	,151(*)	-,006	-,096
	Sig. (2-tailed)																		,026	,031	,929	,170
FS t-1	Pearson Correlation																		1	,892(**)	,099	,100
	Sig. (2-tailed)																			,000	,160	,156
FS (LN) t-1	Pearson Correlation																			1	,039	,046
	Sig. (2-tailed)																				,581	,511
dummy home-abroad	Pearson Correlation																				1	,539(**)
	Sig. (2-tailed)																					,000
Geographic Distance	Pearson Correlation																					1
	Sig. (2-tailed)																					

LOGARITHM SHARE OF EMPLOYEES LAID OFF OVER TOTAL NUMBER		Log Total share of employees	F.D.CAE Inc.	F.D.Royal Bank of Canada	F.D. Sun Life Financial Inc.	F.D. Pixelpark AG	F.D. Siemens	Geographic region effect	Firm geographic dispersion	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	FS t-1	FS (LN) t-1	ROE t	ROA t	dummy home-abroad	Geographic Distance
Log Total share layoff	Pearson Correlation	1	,164(*)	-,317(**)	,149(*)	,199(**)	-,432(**)	-,098	-,385(**)	-,113	,088	,222(**)	,162(*)	-,331(**)	-,311(**)	-,182(**)	-,096	-,272(**)	-,164(*)
	Sig. (2-tailed)		,019	,000	,033	,004	,000	,163	,000	,107	,211	,001	,020	,000	,000	,009	,172	,000	,019
F.D.CAE Inc.	Pearson Correlation		1	-,046	-,020	-,032	-,063	-,177(*)	-,116	,022	,110	-,092	-,038	-,232(**)	-,170(*)	,048	,060	-,280(**)	-,134
	Sig. (2-tailed)			,516	,776	,650	,373	,011	,098	,759	,116	,188	,585	,001	,015	,495	,395	,000	,055
F.D.Royal Bank of Canada	Pearson Correlation			1	-,022	-,036	-,070	-,198(**)	-,063	,062	,228(**)	-,195(**)	,065	,276(**)	,200(**)	,056	,049	,163(*)	,180(**)
	Sig. (2-tailed)				,749	,610	,317	,004	,369	,379	,001	,005	,353	,000	,004	,427	,488	,019	,010
F.D. Sun Life Financial Inc.	Pearson Correlation				1	-,016	-,031	-,087	-,070	-,005	,043	-,020	,027	-,185(**)	-,463(**)	,023	,021	,071	,100
	Sig. (2-tailed)					,823	,661	,215	,317	,943	,538	,775	,699	,008	,000	,748	,763	,308	,155
F.D. Pixelpark AG	Pearson Correlation					1	-,049	,181(**)	-,105	-,055	-,058	,103	,187(**)	-,373(**)	-,356(**)	-,953(**)	-,599(**)	,047	-,022
	Sig. (2-tailed)						,485	,010	,135	,436	,412	,140	,007	,000	,000	,000	,000	,502	,753
F.D. Siemens	Pearson Correlation						1	,354(**)	,791(**)	-,174(*)	-,368(**)	-,162(*)	-,265(**)	,184(**)	,158(*)	,073	,095	,114	-,036
	Sig. (2-tailed)							,000	,000	,012	,000	,020	,000	,008	,024	,300	,174	,103	,606
Geographic region effect	Pearson Correlation							1	,517(**)	-,235(**)	-,713(**)	-,237(**)	-,254(**)	,452(**)	,332(**)	-,135	,013	,070	-,026
	Sig. (2-tailed)								,000	,001	,000	,001	,000	,000	,000	,054	,858	,316	,712
Firm geographic dispersion	Pearson Correlation								1	-,187(**)	-,467(**)	-,229(**)	-,284(**)	,430(**)	,348(**)	,103	,047	,067	,037
	Sig. (2-tailed)									,007	,000	,001	,000	,000	,000	,142	,503	,341	,596
TARGET gdp growth	Pearson Correlation									1	,514(**)	,196(**)	,049	-,086	-,054	,070	,076	,086	,147(*)
	Sig. (2-tailed)										,000	,005	,484	,219	,439	,316	,281	,221	,035
HOME gdp growth	Pearson Correlation										1	,254(**)	,403(**)	-,340(**)	-,268(**)	,061	,037	-,096	,074
	Sig. (2-tailed)											,000	,000	,000	,000	,386	,595	,169	,291
TARGET output gap	Pearson Correlation											1	,610(**)	-,164(*)	-,105	-,119	-,119	-,028	-,201(**)
	Sig. (2-tailed)												,000	,019	,135	,089	,088	,689	,004
HOME output gap	Pearson Correlation												1	-,111	-,112	-,183(**)	-,152(*)	,093	,030
	Sig. (2-tailed)													,112	,111	,009	,029	,185	,674
FS t-1	Pearson Correlation													1	,892(**)	,345(**)	,155(*)	,099	,100
	Sig. (2-tailed)														,000	,000	,026	,160	,156
FS (LN) t-1	Pearson Correlation														1	,326(**)	,151(*)	,039	,046
	Sig. (2-tailed)															,000	,031	,581	,511
ROE t	Pearson Correlation															1	,805(**)	-,037	-,010
	Sig. (2-tailed)																,000	,593	,892
ROA t	Pearson Correlation																1	-,006	-,096
	Sig. (2-tailed)																	,929	,170
dummy home-abroad	Pearson Correlation																	1	,539(**)
	Sig. (2-tailed)																		,000
Geographic Distance	Pearson Correlation																		1
	Sig. (2-tailed)																		

LOGARITHM SHARE OF EMPLOYEES LAID OFF OVER LOCAL NUMBER		Log Local share of employees	F.D. Celstica Inc.	F.D. Quebecor inc.	F.D. Saputo Inc.	F.D. Sun Life Financial Inc.	F.D. Pixelpark AG	F.D. Siemens	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	FS t-1	FS (LN) t-1	ROE t	ROA t	dummy home-abroad	Geographic Distance
Log Local share layoff	Pearson Correlation	1	,227(**)	-,191(**)	-,139(*)	,172(*)	,269(**)	-,152(*)	,119	,179(*)	,054	-,033	,121	-,094	-,160(*)	-,266(**)	-,175(*)	,223(**)	,295(**)
	Sig. (2-tailed)		,001	,006	,046	,014	,000	,030	,089	,010	,438	,643	,084	,182	,022	,000	,012	,001	,000
F.D. Celstica Inc.	Pearson Correlation		1	-,057	-,049	-,019	-,030	-,058	-,165(*)	,152(*)	,053	,102	,027	-,119	-,071	,033	,008	,022	,062
	Sig. (2-tailed)			,421	,486	,791	,672	,406	,018	,030	,452	,147	,700	,089	,309	,640	,907	,753	,375
F.D. Quebecor inc.	Pearson Correlation			1	-,078	-,030	-,048	-,093	-,263(**)	,067	,183(**)	,194(**)	,157(*)	-,054	-,008	,057	,063	-,119	-,083
	Sig. (2-tailed)				,265	,671	,498	,183	,000	,343	,009	,005	,024	,438	,913	,418	,373	,089	,235
F.D. Saputo Inc.	Pearson Correlation				1	-,026	-,041	-,081	-,228(**)	,065	,140(*)	,176(*)	,118	-,299(**)	-,218(**)	,067	,136	,187(**)	-,178(*)
	Sig. (2-tailed)					,713	,558	,250	,001	,353	,045	,012	,091	,000	,002	,340	,052	,007	,011
F.D. Sun Life Financial Inc.	Pearson Correlation					1	-,016	-,031	-,087	-,005	,043	-,020	,027	-,185(**)	-,463(**)	,023	,021	,071	,100
	Sig. (2-tailed)						,823	,661	,215	,943	,538	,775	,699	,008	,000	,748	,763	,308	,155
F.D. Pixelpark AG	Pearson Correlation						1	-,049	,181(**)	-,055	-,058	,103	,187(**)	-,373(**)	-,356(**)	-,953(**)	-,599(**)	,047	-,022
	Sig. (2-tailed)							,485	,010	,436	,412	,140	,007	,000	,000	,000	,000	,502	,753
F.D. Siemens	Pearson Correlation							1	,354(**)	-,174(*)	-,368(**)	-,162(*)	-,265(**)	,184(**)	,158(*)	,073	,095	,114	-,036
	Sig. (2-tailed)								,000	,012	,000	,020	,000	,008	,024	,300	,174	,103	,606
Georgraphic region effect	Pearson Correlation								1	-,235(**)	-,713(**)	-,237(**)	-,254(**)	,452(**)	,332(**)	-,135	,013	,070	-,026
	Sig. (2-tailed)									,001	,000	,001	,000	,000	,000	,054	,858	,316	,712
TARGET gdp growth	Pearson Correlation									1	,514(**)	,196(**)	,049	-,086	-,054	,070	,076	,086	,147(*)
	Sig. (2-tailed)										,000	,005	,484	,219	,439	,316	,281	,221	,035
HOME gdp growth	Pearson Correlation										1	,254(**)	,403(**)	-,340(**)	-,268(**)	,061	,037	-,096	,074
	Sig. (2-tailed)											,000	,000	,000	,000	,386	,595	,169	,291
TARGET output gap	Pearson Correlation											1	,610(**)	-,164(*)	-,105	-,119	-,119	-,028	-,201(**)
	Sig. (2-tailed)												,000	,019	,135	,089	,088	,689	,004
HOME output gap	Pearson Correlation												1	-,111	-,112	-,183(**)	-,152(*)	,093	,030
	Sig. (2-tailed)													,112	,111	,009	,029	,185	,674
FS t-1	Pearson Correlation													1	,892(**)	,345(**)	,155(*)	,099	,100
	Sig. (2-tailed)														,000	,000	,026	,160	,156
FS (LN) t-1	Pearson Correlation														1	,326(**)	,151(*)	,039	,046
	Sig. (2-tailed)															,000	,031	,581	,511
ROE t	Pearson Correlation															1	,805(**)	-,037	-,010
	Sig. (2-tailed)																,000	,593	,892
ROA t	Pearson Correlation																1	-,006	-,096
	Sig. (2-tailed)																	,929	,170
dummy home-abroad	Pearson Correlation																	1	,539(**)
	Sig. (2-tailed)																		,000
Geographic Distance	Pearson Correlation																		1
	Sig. (2-tailed)																		

LEGENDA appendix 5.3.1:

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed). N = 205 for all variables

Appendix 5.3.2: PEARSON CORRELATION FOR REGRESSION MODELS HYPOTHESES 3 AND ADDITIONAL ANALYSIS HP 3

Table A.5.3.2.1 Dependent variable: Performance as average of the last 3 years of the sample

ROE (LAST 3 YEARS)		ROE LAST 3	F.D. ATS Automation Tooling Systems Inc	F.D. Celstica Inc.	F.D. Nortel networks corp.	F.D. Nova Chemicals Corp.	F.D. Quebecor inc.	F.D. Sun Life Financial Inc.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	ABROAD / TOT layoff	Frq ABROAD/ TOT
ROE LAST 3	Pearson Correlation	1	-0,149	-0,313	0,734	-0,257	-0,431	0,159	-0,148	-0,111	0,074	0,138	-0,030	0,035	-0,099	0,141
	Sig. (2-tailed)		0,045	0,000	0,000	0,000	0,000	0,033	0,047	0,134	0,323	0,064	0,691	0,643	0,185	0,058
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation		1	-0,019	-0,035	-0,011	-0,030	-0,011	-0,018	-0,098	-0,007	0,019	-0,001	-0,031	-0,166	-0,277
	Sig. (2-tailed)			0,794	0,640	0,882	0,683	0,882	0,812	0,190	0,920	0,794	0,993	0,679	0,025	0,000
F.D. Celstica Inc.	Pearson Correlation			1	-0,061	-0,019	-0,053	-0,019	-0,031	-0,171	0,143	0,043	0,070	0,014	0,120	0,050
	Sig. (2-tailed)				0,412	0,794	0,475	0,794	0,678	0,021	0,054	0,561	0,349	0,856	0,105	0,503
F.D. Nortel networks corp.	Pearson Correlation				1	-0,035	-0,096	-0,035	-0,056	-0,307	0,134	0,241	0,166	0,130	-0,005	-0,150
	Sig. (2-tailed)					0,640	0,199	0,640	0,455	0,000	0,072	0,001	0,025	0,081	0,947	0,043
F.D. Nova Chemicals Corp.	Pearson Correlation					1	-0,030	-0,011	-0,018	-0,098	-0,079	0,037	0,023	-0,011	-0,066	-0,048
	Sig. (2-tailed)						0,683	0,882	0,812	0,190	0,291	0,616	0,761	0,882	0,374	0,522
F.D. Quebecor inc.	Pearson Correlation						1	-0,030	-0,049	-0,267	0,087	0,205	0,224	0,191	0,281	-0,310
	Sig. (2-tailed)							0,683	0,515	0,000	0,243	0,006	0,002	0,010	0,000	0,000
F.D. Sun Life Financial Inc.	Pearson Correlation							1	-0,018	-0,098	-0,009	0,044	-0,004	0,050	-0,166	0,181
	Sig. (2-tailed)								0,812	0,190	0,908	0,552	0,957	0,500	0,025	0,014
F.D. Pixelpark AG	Pearson Correlation								1	0,182	-0,062	-0,059	0,152	0,248	0,013	0,143
	Sig. (2-tailed)									0,014	0,407	0,426	0,041	0,001	0,858	0,055
Geographic region effect	Pearson Correlation									1	-0,244	-0,753	-0,184	-0,272	-0,273	0,346
	Sig. (2-tailed)										0,001	0,000	0,013	0,000	0,000	0,000
TARGET gdp growth	Pearson Correlation										1	0,496	0,278	0,121	0,151	0,010
	Sig. (2-tailed)											0,000	0,000	0,102	0,042	0,893
HOME gdp growth	Pearson Correlation											1	0,301	0,480	0,317	-0,196
	Sig. (2-tailed)												0,000	0,000	0,000	0,008
TARGET output gap	Pearson Correlation												1	0,513	0,007	-0,227
	Sig. (2-tailed)													0,000	0,930	0,002
HOME output gap	Pearson Correlation													1	0,219	-0,101
	Sig. (2-tailed)														0,003	0,174
ABROAD / TOT layoff	Pearson Correlation														1	0,377
	Sig. (2-tailed)															0,000
frq ABROAD/TOT	Pearson Correlation															1
	Sig. (2-tailed)															

ROA (LAST 3 YEARS)		ROA LAST 3	F.D. Agrium inc	F.D. Nortel networks corp.	F.D. Saputo Inc	F.D. Sun Life Financial Inc.	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	ABROAD / TOT layoff	frq ABROAD/TOT
ROA LAST 3	Pearson Correlation	1	,153(*)	-,732(**)	,200(**)	,407(**)	,201(**)	,224(**)	-,099	-,157(*)	-,181(*)	-,134	-,165(*)	,209(**)
	Sig. (2-tailed)		,039	,000	,007	,000	,006	,002	,186	,034	,015	,070	,026	,005
F.D. Agrium inc.	Pearson Correlation		1	-,076	-,052	-,024	-,024	-,211(**)	,111	,207(**)	,022	,047	-,049	-,048
	Sig. (2-tailed)			,311	,486	,747	,747	,004	,134	,005	,770	,526	,512	,517
F.D. Nortel networks corp.	Pearson Correlation			1	-,076	-,035	-,035	-,307(**)	,134	,241(**)	,166(*)	,130	-,005	-,150(*)
	Sig. (2-tailed)				,311	,640	,640	,000	,072	,001	,025	,081	,947	,043
F.D. Saputo Inc.	Pearson Correlation				1	-,024	-,024	-,211(**)	,079	,158(*)	,142	,086	-,145	-,379(**)
	Sig. (2-tailed)					,747	,747	,004	,291	,033	,055	,248	,051	,000
F.D. Sun Life Financial Inc.	Pearson Correlation					1	-,011	-,098	-,009	,044	-,004	,050	-,166(*)	,181(*)
	Sig. (2-tailed)						,882	,190	,908	,552	,957	,500	,025	,014
F.D. Schering	Pearson Correlation						1	,114	,073	-,076	-,032	-,167(*)	-,166(*)	,181(*)
	Sig. (2-tailed)							,126	,326	,305	,670	,024	,025	,014
Geographic region effect	Pearson Correlation							1	-,244(**)	-,753(**)	-,184(*)	-,272(**)	-,273(**)	,346(**)
	Sig. (2-tailed)								,001	,000	,013	,000	,000	,000
TARGET gdp growth	Pearson Correlation								1	,496(**)	,278(**)	,121	,151(*)	,010
	Sig. (2-tailed)									,000	,000	,102	,042	,893
HOME gdp growth	Pearson Correlation									1	,301(**)	,480(**)	,317(**)	-,196(**)
	Sig. (2-tailed)										,000	,000	,000	,008
TARGET output gap	Pearson Correlation										1	,513(**)	,007	-,227(**)
	Sig. (2-tailed)											,000	,930	,002
HOME output gap	Pearson Correlation											1	,219(**)	-,101
	Sig. (2-tailed)												,003	,174
ABROAD / TOT layoff	Pearson Correlation												1	,377(**)
	Sig. (2-tailed)													,000
frq ABROAD/TOT	Pearson Correlation													1
	Sig. (2-tailed)													

TOBIN'S Q 1) (LAST 3YEARS)		1)TOBIN'S Q last 3	F.D. ATS Automation Tooling Systems Inc	F.D. Quebecor inc.	F.D.Royal Bank of Canada	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	ABROAD / TOT layoff	frq ABROAD/TOT
1)TOBIN'S Q last 3	Pearson Correlation	1	0,886	-0,151	-0,164	-0,185	0,217	-0,048	-0,006	-0,030	-0,010	-0,121	-0,392	-0,318
	Sig. (2-tailed)		0,000	0,042	0,027	0,013	0,003	0,520	0,935	0,687	0,896	0,103	0,000	0,000
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation		1	-0,030	-0,024	-0,035	-0,011	-0,098	-0,007	0,019	-0,001	-0,031	-0,166	-0,277
	Sig. (2-tailed)			0,683	0,747	0,640	0,882	0,190	0,920	0,794	0,993	0,679	0,025	0,000
F.D. Quebecor inc.	Pearson Correlation			1	-0,066	-0,096	-0,030	-0,267	0,087	0,205	0,224	0,191	0,281	-0,310
	Sig. (2-tailed)				0,377	0,199	0,683	0,000	0,243	0,006	0,002	0,010	0,000	0,000
F.D.Royal Bank of Canada	Pearson Correlation				1	-0,076	-0,024	-0,211	0,089	0,271	-0,217	0,107	0,421	0,392
	Sig. (2-tailed)					0,311	0,747	0,004	0,234	0,000	0,003	0,149	0,000	0,000
F.D. Deutsche Bank	Pearson Correlation					1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,177	0,249
	Sig. (2-tailed)						0,640	0,000	0,869	0,005	0,940	0,709	0,017	0,001
F.D. Schering	Pearson Correlation						1	0,114	0,073	-0,076	-0,032	-0,167	-0,166	0,181
	Sig. (2-tailed)							0,126	0,326	0,305	0,670	0,024	0,025	0,014
Geographic region effect	Pearson Correlation							1	-0,244	-0,753	-0,184	-0,272	-0,273	0,346
	Sig. (2-tailed)								0,001	0,000	0,013	0,000	0,000	0,000
TARGET gdp growth	Pearson Correlation								1	0,496	0,278	0,121	0,151	0,010
	Sig. (2-tailed)									0,000	0,000	0,102	0,042	0,893
HOME gdp growth	Pearson Correlation									1	0,301	0,480	0,317	-0,196
	Sig. (2-tailed)										0,000	0,000	0,000	0,008
TARGET output gap	Pearson Correlation										1	0,513	0,007	-0,227
	Sig. (2-tailed)											0,000	0,930	0,002
HOME output gap	Pearson Correlation											1	0,219	-0,101
	Sig. (2-tailed)												0,003	0,174
ABROAD / TOT layoff	Pearson Correlation												1	0,377
	Sig. (2-tailed)													0,000
frq ABROAD/TOT	Pearson Correlation													1
	Sig. (2-tailed)													

TOBIN'S Q 2) (LAST 3)		2)TOBIN'S Q last 3	F.D. Agrium inc.	F.D. ATS Automation Tooling Systems Inc	F.D.CAE Inc.	F.D. Saputo Inc.	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	ABROAD / TOT layoff	frq ABROAD/TOT
2)TOBIN'S Q last 3	Pearson Correlation	1	0,153	0,859	0,154	0,257	-0,241	0,173	-0,173	0,026	0,065	0,011	-0,078	-0,348	-0,411
	Sig. (2-tailed)		0,039	0,000	0,038	0,000	0,001	0,020	0,020	0,726	0,381	0,883	0,294	0,000	0,000
F.D. Agrium inc.	Pearson Correlation		1	-0,024	-0,049	-0,052	-0,076	-0,024	-0,211	0,111	0,207	0,022	0,047	-0,049	-0,048
	Sig. (2-tailed)			0,747	0,512	0,486	0,311	0,747	0,004	0,134	0,005	0,770	0,526	0,512	0,517
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation			1	-0,023	-0,024	-0,035	-0,011	-0,098	-0,007	0,019	-0,001	-0,031	-0,166	-0,277
	Sig. (2-tailed)				0,762	0,747	0,640	0,882	0,190	0,920	0,794	0,993	0,679	0,025	0,000
F.D.CAE Inc.	Pearson Correlation				1	-0,049	-0,071	-0,023	-0,199	0,015	0,113	-0,068	-0,007	-0,282	-0,214
	Sig. (2-tailed)					0,512	0,341	0,762	0,007	0,838	0,128	0,359	0,926	0,000	0,004
F.D. Saputo Inc.	Pearson Correlation					1	-0,076	-0,024	-0,211	0,079	0,158	0,142	0,086	-0,145	-0,379
	Sig. (2-tailed)						0,311	0,747	0,004	0,291	0,033	0,055	0,248	0,051	0,000
F.D. Deutsche Bank	Pearson Correlation						1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,177	0,249
	Sig. (2-tailed)							0,640	0,000	0,869	0,005	0,940	0,709	0,017	0,001
F.D. Schering	Pearson Correlation							1	0,114	0,073	-0,076	-0,032	-0,167	-0,166	0,181
	Sig. (2-tailed)								0,126	0,326	0,305	0,670	0,024	0,025	0,014
Geographic region effect	Pearson Correlation								1	-0,244	-0,753	-0,184	-0,272	-0,273	0,346
	Sig. (2-tailed)									0,001	0,000	0,013	0,000	0,000	0,000
TARGET gdp growth	Pearson Correlation									1	0,496	0,278	0,121	0,151	0,010
	Sig. (2-tailed)										0,000	0,000	0,102	0,042	0,893
HOME gdp growth	Pearson Correlation										1	0,301	0,480	0,317	-0,196
	Sig. (2-tailed)											0,000	0,000	0,000	0,008
TARGET output gap	Pearson Correlation											1	0,513	0,007	-0,227
	Sig. (2-tailed)												0,000	0,930	0,002
HOME output gap	Pearson Correlation												1	0,219	-0,101
	Sig. (2-tailed)													0,003	0,174
ABROAD / TOT layoff	Pearson Correlation													1	0,377
	Sig. (2-tailed)														0,000
frq ABROAD/TOT	Pearson Correlation														1
	Sig. (2-tailed)														

Table A.5.3.2.2 Dependent variable: Performance over the year following layoff [t+1]

ROE (T+ 1)		ROE t+1	F.D. Nortel networks corp.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	x year ABROAD / TOT layoff	year frq ABROAD/TOT
ROE t+1	Pearson Correlation	1	-0,400	-0,657	0,027	-0,084	-0,133	-0,283	-0,316	0,090	0,082
	Sig. (2-tailed)		0,000	0,000	0,720	0,257	0,074	0,000	0,000	0,227	0,272
F.D. Nortel networks corp.	Pearson Correlation		1	-0,056	-0,307	0,134	0,241	0,166	0,130	-0,036	-0,106
	Sig. (2-tailed)			0,455	0,000	0,072	0,001	0,025	0,081	0,631	0,155
F.D. Pixelpark AG	Pearson Correlation			1	0,182	-0,062	-0,059	0,152	0,248	-0,002	0,101
	Sig. (2-tailed)				0,014	0,407	0,426	0,041	0,001	0,981	0,176
Geographic region effect	Pearson Correlation				1	-0,244	-0,753	-0,184	-0,272	-0,084	0,244
	Sig. (2-tailed)					0,001	0,000	0,013	0,000	0,257	0,001
TARGET gdp growth	Pearson Correlation					1	0,496	0,278	0,121	-0,053	-0,114
	Sig. (2-tailed)						0,000	0,000	0,102	0,478	0,125
HOME gdp growth	Pearson Correlation						1	0,301	0,480	0,048	-0,189
	Sig. (2-tailed)							0,000	0,000	0,523	0,011
TARGET output gap	Pearson Correlation							1	0,513	-0,083	-0,213
	Sig. (2-tailed)								0,000	0,266	0,004
HOME output gap	Pearson Correlation								1	0,141	0,007
	Sig. (2-tailed)									0,058	0,920
x year ABROAD / TOT layoff	Pearson Correlation									1	0,706
	Sig. (2-tailed)										0,000
year frq ABROAD/TOT	Pearson Correlation										1
	Sig. (2-tailed)										

ROA (T+ 1)		ROA t+1	F.D. Nortel networks corp.	F.D. Sun Life Financial Inc.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	x year ABROAD / TOT layoff	year frq ABROAD/TOT
ROA t+1	Pearson Correlation	1	-0,211	0,163	-0,845	-0,069	-0,045	-0,061	-0,264	-0,330	0,073	0,036
	Sig. (2-tailed)		0,004	0,028	0,000	0,353	0,549	0,416	0,000	0,000	0,326	0,634
F.D. Nortel networks corp.	Pearson Correlation		1	-0,035	-0,056	-0,307	0,134	0,241	0,166	0,130	-0,036	-0,106
	Sig. (2-tailed)			0,640	0,455	0,000	0,072	0,001	0,025	0,081	0,631	0,155
F.D. Sun Life Financial Inc.	Pearson Correlation			1	-0,018	-0,098	-0,009	0,044	-0,004	0,050	0,145	0,128
	Sig. (2-tailed)				0,812	0,190	0,908	0,552	0,957	0,500	0,051	0,086
F.D. Pixelpark AG	Pearson Correlation				1	0,182	-0,062	-0,059	0,152	0,248	-0,002	0,101
	Sig. (2-tailed)					0,014	0,407	0,426	0,041	0,001	0,981	0,176
Geographic region effect	Pearson Correlation					1	-0,244	-0,753	-0,184	-0,272	-0,084	0,244
	Sig. (2-tailed)						0,001	0,000	0,013	0,000	0,257	0,001
TARGET gdp growth	Pearson Correlation						1	0,496	0,278	0,121	-0,053	-0,114
	Sig. (2-tailed)							0,000	0,000	0,102	0,478	0,125
HOME gdp growth	Pearson Correlation							1	0,301	0,480	0,048	-0,189
	Sig. (2-tailed)								0,000	0,000	0,523	0,011
TARGET output gap	Pearson Correlation								1	0,513	-0,083	-0,213
	Sig. (2-tailed)									0,000	0,266	0,004
HOME output gap	Pearson Correlation									1	0,141	0,007
	Sig. (2-tailed)										0,058	0,920
x year ABROAD / TOT layoff	Pearson Correlation										1	0,706
	Sig. (2-tailed)											0,000
year frq ABROAD/TOT	Pearson Correlation											1
	Sig. (2-tailed)											

TOBIN'S Q 1) (T+ 1)		1) T'S Q t+1	F.D. ATS Automation Tooling Systems Inc	F.D.CAE Inc.	F.D. Nortel networks corp.	F.D.Royal Bank of Canada	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	x year ABROAD / TOT layoff	year frq ABROAD/TOT
1) T'S Q t+1	Pearson Correlation	1	0,699	0,181	0,201	-0,194	-0,213	0,162	-0,131	0,059	0,114	0,039	-0,034	-0,267	-0,218
	Sig. (2-tailed)		0,000	0,014	0,006	0,009	0,004	0,028	0,078	0,428	0,124	0,597	0,653	0,000	0,003
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation		1	-0,023	-0,035	-0,024	-0,035	-0,011	-0,098	-0,007	0,019	-0,001	-0,031	-0,138	-0,195
	Sig. (2-tailed)			0,762	0,640	0,747	0,640	0,882	0,190	0,920	0,794	0,993	0,679	0,063	0,008
F.D.CAE Inc.	Pearson Correlation			1	-0,071	-0,049	-0,071	-0,023	-0,199	0,015	0,113	-0,068	-0,007	-0,235	-0,151
	Sig. (2-tailed)				0,341	0,512	0,341	0,762	0,007	0,838	0,128	0,359	0,926	0,001	0,042
F.D. Nortel networks corp.	Pearson Correlation				1	-0,076	-0,110	-0,035	-0,307	0,134	0,241	0,166	0,130	-0,036	-0,106
	Sig. (2-tailed)					0,311	0,140	0,640	0,000	0,072	0,001	0,025	0,081	0,631	0,155
F.D.Royal Bank of Canada	Pearson Correlation					1	-0,076	-0,024	-0,211	0,089	0,271	-0,217	0,107	0,314	0,276
	Sig. (2-tailed)						0,311	0,747	0,004	0,234	0,000	0,003	0,149	0,000	0,000
F.D. Deutsche Bank	Pearson Correlation						1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,056	0,176
	Sig. (2-tailed)							0,640	0,000	0,869	0,005	0,940	0,709	0,453	0,018
F.D. Schering	Pearson Correlation							1	0,114	0,073	-0,076	-0,032	-0,167	0,145	0,128
	Sig. (2-tailed)								0,126	0,326	0,305	0,670	0,024	0,051	0,086
Geographic region effect	Pearson Correlation								1	-0,244	-0,753	-0,184	-0,272	-0,084	0,244
	Sig. (2-tailed)									0,001	0,000	0,013	0,000	0,257	0,001
TARGET gdp growth	Pearson Correlation									1	0,496	0,278	0,121	-0,053	-0,114
	Sig. (2-tailed)										0,000	0,000	0,102	0,478	0,125
HOME gdp growth	Pearson Correlation										1	0,301	0,480	0,048	-0,189
	Sig. (2-tailed)											0,000	0,000	0,523	0,011
TARGET output gap	Pearson Correlation											1	0,513	-0,083	-0,213
	Sig. (2-tailed)												0,000	0,266	0,004
HOME output gap	Pearson Correlation												1	0,141	0,007
	Sig. (2-tailed)													0,058	0,920
x year ABROAD / TOT layoff	Pearson Correlation													1	0,706
	Sig. (2-tailed)														0,000
year frq ABROAD/TOT	Pearson Correlation														1
	Sig. (2-tailed)														

TOBIN'S Q 2) (T+ 1)		2) T'S Q t+1	F.D. ATS Automation Tooling Systems Inc	F.D.CAE Inc.	F.D. Nortel networks corp.	F.D.Royal Bank of Canada	F.D. Saputo Inc.	F.D. Deutsche Bank	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	x year ABROAD / TOT layoff	frq ABROAD/TOT
2) T'S Q t+1	Pearson Correlation	1	0,669	0,235	0,160	-0,178	0,194	-0,252	-0,340	0,122	0,277	0,070	0,011	-0,276	-0,452
	Sig. (2-tailed)		0,000	0,001	0,031	0,017	0,009	0,001	0,000	0,101	0,000	0,346	0,885	0,000	0,000
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation		1	-0,023	-0,035	-0,024	-0,024	-0,035	-0,098	-0,007	0,019	-0,001	-0,031	-0,138	-0,277
	Sig. (2-tailed)			0,762	0,640	0,747	0,747	0,640	0,190	0,920	0,794	0,993	0,679	0,063	0,000
F.D.CAE Inc.	Pearson Correlation			1	-0,071	-0,049	-0,049	-0,071	-0,199	0,015	0,113	-0,068	-0,007	-0,235	-0,214
	Sig. (2-tailed)				0,341	0,512	0,512	0,341	0,007	0,838	0,128	0,359	0,926	0,001	0,004
F.D. Nortel networks corp.	Pearson Correlation				1	-0,076	-0,076	-0,110	-0,307	0,134	0,241	0,166	0,130	-0,036	-0,150
	Sig. (2-tailed)					0,311	0,311	0,140	0,000	0,072	0,001	0,025	0,081	0,631	0,043
F.D.Royal Bank of Canada	Pearson Correlation					1	-0,052	-0,076	-0,211	0,089	0,271	-0,217	0,107	0,314	0,392
	Sig. (2-tailed)						0,486	0,311	0,004	0,234	0,000	0,003	0,149	0,000	0,000
F.D. Saputo Inc.	Pearson Correlation						1	-0,076	-0,211	0,079	0,158	0,142	0,086	-0,154	-0,379
	Sig. (2-tailed)							0,311	0,004	0,291	0,033	0,055	0,248	0,037	0,000
F.D. Deutsche Bank	Pearson Correlation							1	0,358	0,012	-0,208	-0,006	0,028	0,056	0,249
	Sig. (2-tailed)								0,000	0,869	0,005	0,940	0,709	0,453	0,001
Geographic region effect	Pearson Correlation								1	-0,244	-0,753	-0,184	-0,272	-0,084	0,346
	Sig. (2-tailed)									0,001	0,000	0,013	0,000	0,257	0,000
TARGET gdp growth	Pearson Correlation									1	0,496	0,278	0,121	-0,053	0,010
	Sig. (2-tailed)										0,000	0,000	0,102	0,478	0,893
HOME gdp growth	Pearson Correlation										1	0,301	0,480	0,048	-0,196
	Sig. (2-tailed)											0,000	0,000	0,523	0,008
TARGET output gap	Pearson Correlation											1	0,513	-0,083	-0,227
	Sig. (2-tailed)												0,000	0,266	0,002
HOME output gap	Pearson Correlation												1	0,141	-0,101
	Sig. (2-tailed)													0,058	0,174
x year ABROAD / TOT layoff	Pearson Correlation													1	0,439
	Sig. (2-tailed)														0,000
frq ABROAD/TOT	Pearson Correlation														1
	Sig. (2-tailed)														

Table A.5.3.2.3 Dependent variable: Performance average f the three years following layoff [M_{t+3}]

ROE M_{T+3}		ROE M_{t+3}	F.D. Nortel networks corp.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	x year ABROAD / TOT layoff	year frq ABROAD/TOT
ROE M_{t+3}	Pearson Correlation	1	-0,538	-0,601	0,088	-0,139	-0,214	-0,290	-0,316	0,176	0,186
	Sig. (2-tailed)		0,000	0,000	0,237	0,061	0,004	0,000	0,000	0,018	0,012
F.D. Nortel networks corp.	Pearson Correlation		1	-0,056	-0,307	0,134	0,241	0,166	0,130	-0,036	-0,106
	Sig. (2-tailed)			0,455	0,000	0,072	0,001	0,025	0,081	0,631	0,155
F.D. Pixelpark AG	Pearson Correlation			1	0,182	-0,062	-0,059	0,152	0,248	-0,002	0,101
	Sig. (2-tailed)				0,014	0,407	0,426	0,041	0,001	0,981	0,176
Geographic region effect	Pearson Correlation				1	-0,244	-0,753	-0,184	-0,272	-0,084	0,244
	Sig. (2-tailed)					0,001	0,000	0,013	0,000	0,257	0,001
TARGET gdp growth	Pearson Correlation					1	0,496	0,278	0,121	-0,053	-0,114
	Sig. (2-tailed)						0,000	0,000	0,102	0,478	0,125
HOME gdp growth	Pearson Correlation						1	0,301	0,480	0,048	-0,189
	Sig. (2-tailed)							0,000	0,000	0,523	0,011
TARGET output gap	Pearson Correlation							1	0,513	-0,083	-0,213
	Sig. (2-tailed)								0,000	0,266	0,004
HOME output gap	Pearson Correlation								1	0,141	0,007
	Sig. (2-tailed)									0,058	0,920
x year ABROAD / TOT layoff	Pearson Correlation									1	0,706
	Sig. (2-tailed)										0,000
year frq ABROAD/TOT	Pearson Correlation										1
	Sig. (2-tailed)										

ROA M_{T+3}		ROA M_{t+3}	F.D. Nortel networks corp.	F.D. Saputo Inc.	F.D. Sun Life Financial Inc.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	x year ABROAD / TOT layoff	year frq ABROAD/TOT
ROA M_{t+3}	Pearson Correlation	1	-0,289	0,160	0,283	-0,750	-0,023	-0,095	-0,119	-0,257	-0,312	0,128	0,101
	Sig. (2-tailed)		0,000	0,031	0,000	0,000	0,757	0,204	0,109	0,000	0,000	0,084	0,176
F.D. Nortel networks corp.	Pearson Correlation		1	-0,076	-0,035	-0,056	-0,307	0,134	0,241	0,166	0,130	-0,036	-0,106
	Sig. (2-tailed)			0,311	0,640	0,455	0,000	0,072	0,001	0,025	0,081	0,631	0,155
F.D. Saputo Inc.	Pearson Correlation			1	-0,024	-0,038	-0,211	0,079	0,158	0,142	0,086	-0,154	-0,267
	Sig. (2-tailed)				0,747	0,607	0,004	0,291	0,033	0,055	0,248	0,037	0,000
F.D. Sun Life Financial Inc.	Pearson Correlation				1	-0,018	-0,098	-0,009	0,044	-0,004	0,050	0,145	0,128
	Sig. (2-tailed)					0,812	0,190	0,908	0,552	0,957	0,500	0,051	0,086
F.D. Pixelpark AG	Pearson Correlation					1	0,182	-0,062	-0,059	0,152	0,248	-0,002	0,101
	Sig. (2-tailed)						0,014	0,407	0,426	0,041	0,001	0,981	0,176
Geographic region effect	Pearson Correlation						1	-0,244	-0,753	-0,184	-0,272	-0,084	0,244
	Sig. (2-tailed)							0,001	0,000	0,013	0,000	0,257	0,001
TARGET gdp growth	Pearson Correlation							1	0,496	0,278	0,121	-0,053	-0,114
	Sig. (2-tailed)								0,000	0,000	0,102	0,478	0,125
HOME gdp growth	Pearson Correlation								1	0,301	0,480	0,048	-0,189
	Sig. (2-tailed)									0,000	0,000	0,523	0,011
TARGET output gap	Pearson Correlation									1	0,513	-0,083	-0,213
	Sig. (2-tailed)										0,000	0,266	0,004
HOME output gap	Pearson Correlation										1	0,141	0,007
	Sig. (2-tailed)											0,058	0,920
x year ABROAD / TOT layoff	Pearson Correlation											1	0,706
	Sig. (2-tailed)												0,000
year frq ABROAD/TOT	Pearson Correlation												1
	Sig. (2-tailed)												

TOBIN'S Q 1) M_{T+3}		T's Q 1) M_{t+3}	F.D. ATS Automation Tooling Systems Inc	F.D. Quebecor inc.	F.D.Royal Bank of Canada	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	x year ABROAD / TOT layoff	year frq ABROAD/TOT
T's Q 1) M_{t+3}	Pearson Correlation	1	0,837	-0,167	-0,185	-0,211	0,214	-0,083	0,030	0,039	0,026	-0,094	-0,241	-0,205
	Sig. (2-tailed)		0,000	0,024	0,013	0,004	0,004	0,268	0,683	0,602	0,729	0,207	0,001	0,005
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation		1	-0,030	-0,024	-0,035	-0,011	-0,098	-0,007	0,019	-0,001	-0,031	-0,138	-0,195
	Sig. (2-tailed)			0,683	0,747	0,640	0,882	0,190	0,920	0,794	0,993	0,679	0,063	0,008
F.D. Quebecor inc.	Pearson Correlation			1	-0,066	-0,096	-0,030	-0,267	0,087	0,205	0,224	0,191	0,101	-0,219
	Sig. (2-tailed)				0,377	0,199	0,683	0,000	0,243	0,006	0,002	0,010	0,176	0,003
F.D.Royal Bank of Canada	Pearson Correlation				1	-0,076	-0,024	-0,211	0,089	0,271	-0,217	0,107	0,314	0,276
	Sig. (2-tailed)					0,311	0,747	0,004	0,234	0,000	0,003	0,149	0,000	0,000
F.D. Deutsche Bank	Pearson Correlation					1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,056	0,176
	Sig. (2-tailed)						0,640	0,000	0,869	0,005	0,940	0,709	0,453	0,018
F.D. Schering	Pearson Correlation						1	0,114	0,073	-0,076	-0,032	-0,167	0,145	0,128
	Sig. (2-tailed)							0,126	0,326	0,305	0,670	0,024	0,051	0,086
Geographic region effect	Pearson Correlation							1	-0,244	-0,753	-0,184	-0,272	-0,084	0,244
	Sig. (2-tailed)								0,001	0,000	0,013	0,000	0,257	0,001
TARGET gdp growth	Pearson Correlation								1	0,496	0,278	0,121	-0,053	-0,114
	Sig. (2-tailed)									0,000	0,000	0,102	0,478	0,125
HOME gdp growth	Pearson Correlation									1	0,301	0,480	0,048	-0,189
	Sig. (2-tailed)										0,000	0,000	0,523	0,011
TARGET output gap	Pearson Correlation										1	0,513	-0,083	-0,213
	Sig. (2-tailed)											0,000	0,266	0,004
HOME output gap	Pearson Correlation											1	0,141	0,007
	Sig. (2-tailed)												0,058	0,920
x year ABROAD / TOT layoff	Pearson Correlation												1	0,706
	Sig. (2-tailed)													0,000
year frq ABROAD/TOT	Pearson Correlation													1
	Sig. (2-tailed)													

TOBIN'S Q 2) M_{T+3}		T's Q 2) M_{t+3}	F.D. ATS Automation Tooling Systems Inc	F.D.Royal Bank of Canada	F.D. Saputo Inc.	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	x year ABROAD / TOT layoff	year frq ABROAD/TOT
T's Q 2) M_{t+3}	Pearson Correlation	1	0,813	-0,171	0,236	-0,255	0,158	-0,277	0,084	0,188	0,055	-0,052	-0,250	-0,305
	Sig. (2-tailed)		0,000	0,021	0,001	0,001	0,034	0,000	0,257	0,011	0,463	0,484	0,001	0,000
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation		1	-0,024	-0,024	-0,035	-0,011	-0,098	-0,007	0,019	-0,001	-0,031	-0,138	-0,195
	Sig. (2-tailed)			0,747	0,747	0,640	0,882	0,190	0,920	0,794	0,993	0,679	0,063	0,008
F.D.Royal Bank of Canada	Pearson Correlation			1	-0,052	-0,076	-0,024	-0,211	0,089	0,271	-0,217	0,107	0,314	0,276
	Sig. (2-tailed)				0,486	0,311	0,747	0,004	0,234	0,000	0,003	0,149	0,000	0,000
F.D. Saputo Inc.	Pearson Correlation				1	-0,076	-0,024	-0,211	0,079	0,158	0,142	0,086	-0,154	-0,267
	Sig. (2-tailed)					0,311	0,747	0,004	0,291	0,033	0,055	0,248	0,037	0,000
F.D. Deutsche Bank	Pearson Correlation					1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,056	0,176
	Sig. (2-tailed)						0,640	0,000	0,869	0,005	0,940	0,709	0,453	0,018
F.D. Schering	Pearson Correlation						1	0,114	0,073	-0,076	-0,032	-0,167	0,145	0,128
	Sig. (2-tailed)							0,126	0,326	0,305	0,670	0,024	0,051	0,086
Geographic region effect	Pearson Correlation							1	-0,244	-0,753	-0,184	-0,272	-0,084	0,244
	Sig. (2-tailed)								0,001	0,000	0,013	0,000	0,257	0,001
TARGET gdp growth	Pearson Correlation								1	0,496	0,278	0,121	-0,053	-0,114
	Sig. (2-tailed)									0,000	0,000	0,102	0,478	0,125
HOME gdp growth	Pearson Correlation									1	0,301	0,480	0,048	-0,189
	Sig. (2-tailed)										0,000	0,000	0,523	0,011
TARGET output gap	Pearson Correlation										1	0,513	-0,083	-0,213
	Sig. (2-tailed)											0,000	0,266	0,004
HOME output gap	Pearson Correlation											1	0,141	0,007
	Sig. (2-tailed)												0,058	0,920
x year ABROAD / TOT layoff	Pearson Correlation												1	0,706
	Sig. (2-tailed)													0,000
year frq ABROAD/TOT	Pearson Correlation													1
	Sig. (2-tailed)													

Appendix 5.3.3: PEARSON CORRELATION FOR REGRESSION MODELS HYPOTHESES 4

Table A.5.3.3.1 Independent variable: layoff measured in absolute numbers

ROE M_{T+3}		ROE M_{t+3}	F.D. Nortel networks corp.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	N. of employees laid off	Geographic Distance	Interaction Absolute-Dist
ROE M_{t+3}	Pearson Correlation	1	-0,538	-0,601	0,088	-0,139	-0,214	-0,290	-0,316	0,073	0,082	-0,007
	Sig. (2-tailed)		0,000	0,000	0,237	0,061	0,004	0,000	0,000	0,328	0,270	0,929
F.D. Nortel networks corp.	Pearson Correlation		1	-0,056	-0,307	0,134	0,241	0,166	0,130	-0,062	0,099	-0,033
	Sig. (2-tailed)			0,455	0,000	0,072	0,001	0,025	0,081	0,409	0,186	0,661
F.D. Pixelpark AG	Pearson Correlation			1	0,182	-0,062	-0,059	0,152	0,248	-0,055	-0,022	0,007
	Sig. (2-tailed)				0,014	0,407	0,426	0,041	0,001	0,460	0,768	0,922
Geographic region effect	Pearson Correlation				1	-0,244	-0,753	-0,184	-0,272	0,266	-0,011	-0,001
	Sig. (2-tailed)					0,001	0,000	0,013	0,000	0,000	0,878	0,990
TARGET gdp growth	Pearson Correlation					1	0,496	0,278	0,121	-0,236	0,165	-0,005
	Sig. (2-tailed)						0,000	0,000	0,102	0,001	0,026	0,944
HOME gdp growth	Pearson Correlation						1	0,301	0,480	-0,185	0,090	0,022
	Sig. (2-tailed)							0,000	0,000	0,012	0,227	0,769
TARGET output gap	Pearson Correlation							1	0,513	-0,020	-0,259	0,067
	Sig. (2-tailed)								0,000	0,786	0,000	0,367
HOME output gap	Pearson Correlation								1	0,020	0,031	0,131
	Sig. (2-tailed)									0,790	0,675	0,077
N. of employees laid off	Pearson Correlation									1	-0,006	0,534
	Sig. (2-tailed)										0,938	0,000
Geographic Distance	Pearson Correlation										1	-0,036
	Sig. (2-tailed)											0,625
Interaction Absolute-Dist	Pearson Correlation											1
	Sig. (2-tailed)											

ROA M_{T+3}		ROA M_{t+3}	F.D. Nortel networks corp.	F.D. Saputo Inc.	F.D. Sun Life Financial Inc.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	N. of employees laid off	Geographic Distance	Interaction Absolute-Dist
ROA M_{t+3}	Pearson Correlation	1	-0,289	0,160	0,283	-0,750	-0,023	-0,095	-0,119	-0,257	-0,312	0,058	0,095	-0,018
	Sig. (2-tailed)		0,000	0,031	0,000	0,000	0,757	0,204	0,109	0,000	0,000	0,434	0,202	0,813
F.D. Nortel networks corp.	Pearson Correlation		1	-0,076	-0,035	-0,056	-0,307	0,134	0,241	0,166	0,130	-0,062	0,099	-0,033
	Sig. (2-tailed)			0,311	0,640	0,455	0,000	0,072	0,001	0,025	0,081	0,409	0,186	0,661
F.D. Saputo Inc.	Pearson Correlation			1	-0,024	-0,038	-0,211	0,079	0,158	0,142	0,086	-0,072	-0,156	0,045
	Sig. (2-tailed)				0,747	0,607	0,004	0,291	0,033	0,055	0,248	0,332	0,036	0,545
F.D. Sun Life Financial Inc.	Pearson Correlation				1	-0,018	-0,098	-0,009	0,044	-0,004	0,050	-0,010	0,104	-0,008
	Sig. (2-tailed)					0,812	0,190	0,908	0,552	0,957	0,500	0,894	0,162	0,913
F.D. Pixelpark AG	Pearson Correlation					1	0,182	-0,062	-0,059	0,152	0,248	-0,055	-0,022	0,007
	Sig. (2-tailed)						0,014	0,407	0,426	0,041	0,001	0,460	0,768	0,922
Geographic region effect	Pearson Correlation						1	-0,244	-0,753	-0,184	-0,272	0,266	-0,011	-0,001
	Sig. (2-tailed)							0,001	0,000	0,013	0,000	0,000	0,878	0,990
TARGET gdp growth	Pearson Correlation							1	0,496	0,278	0,121	-0,236	0,165	-0,005
	Sig. (2-tailed)								0,000	0,000	0,102	0,001	0,026	0,944
HOME gdp growth	Pearson Correlation								1	0,301	0,480	-0,185	0,090	0,022
	Sig. (2-tailed)									0,000	0,000	0,012	0,227	0,769
TARGET output gap	Pearson Correlation									1	0,513	-0,020	-0,259	0,067
	Sig. (2-tailed)										0,000	0,786	0,000	0,367
HOME output gap	Pearson Correlation										1	0,020	0,031	0,131
	Sig. (2-tailed)											0,790	0,675	0,077
N. of employees laid off	Pearson Correlation											1	-0,006	0,534
	Sig. (2-tailed)												0,938	0,000
Geographic Distance	Pearson Correlation												1	-0,036
	Sig. (2-tailed)													0,625
Interaction Absolute-Dist	Pearson Correlation													1
	Sig. (2-tailed)													

TOBIN'S Q 1) M_{T+3}		T's Q 1) M_{t+3}	F.D. Quebecor inc.	F.D.Royal Bank of Canada	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	N. of employees laid off	Geographic Distance	Interaction Absolute-Dist
T's Q 1) M_{t+3}	Pearson Correlation	1	-0,167	-0,185	-0,211	0,214	-0,083	0,030	0,039	0,026	-0,094	-0,066	-0,070	-0,001
	Sig. (2-tailed)		0,024	0,013	0,004	0,004	0,268	0,683	0,602	0,729	0,207	0,375	0,350	0,992
F.D. Quebecor inc.	Pearson Correlation		1	-0,066	-0,096	-0,030	-0,267	0,087	0,205	0,224	0,191	-0,064	-0,157	0,036
	Sig. (2-tailed)			0,377	0,199	0,683	0,000	0,243	0,006	0,002	0,010	0,391	0,035	0,631
F.D.Royal Bank of Canada	Pearson Correlation			1	-0,076	-0,024	-0,211	0,089	0,271	-0,217	0,107	-0,072	0,213	-0,066
	Sig. (2-tailed)				0,311	0,747	0,004	0,234	0,000	0,003	0,149	0,331	0,004	0,374
F.D. Deutsche Bank	Pearson Correlation				1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,024	0,044	0,004
	Sig. (2-tailed)					0,640	0,000	0,869	0,005	0,940	0,709	0,750	0,558	0,960
F.D. Schering	Pearson Correlation					1	0,114	0,073	-0,076	-0,032	-0,167	-0,032	0,219	-0,059
	Sig. (2-tailed)						0,126	0,326	0,305	0,670	0,024	0,664	0,003	0,426
Geographic region effect	Pearson Correlation						1	-0,244	-0,753	-0,184	-0,272	0,266	-0,011	-0,001
	Sig. (2-tailed)							0,001	0,000	0,013	0,000	0,000	0,878	0,990
TARGET gdp growth	Pearson Correlation							1	0,496	0,278	0,121	-0,236	0,165	-0,005
	Sig. (2-tailed)								0,000	0,000	0,102	0,001	0,026	0,944
HOME gdp growth	Pearson Correlation								1	0,301	0,480	-0,185	0,090	0,022
	Sig. (2-tailed)									0,000	0,000	0,012	0,227	0,769
TARGET output gap	Pearson Correlation									1	0,513	-0,020	-0,259	0,067
	Sig. (2-tailed)										0,000	0,786	0,000	0,367
HOME output gap	Pearson Correlation										1	0,020	0,031	0,131
	Sig. (2-tailed)											0,790	0,675	0,077
N. of employees laid off	Pearson Correlation											1	-0,006	0,534
	Sig. (2-tailed)												0,938	0,000
Geographic Distance	Pearson Correlation												1	-0,036
	Sig. (2-tailed)													0,625
Interaction Absolute-Dist	Pearson Correlation													1
	Sig. (2-tailed)													

TOBIN'S Q 2) M_{T+3}		T's Q 2) M_{t+3}	F.D. ATS Automation Tooling Systems Inc	F.D.Royal Bank of Canada	F.D. Saputo Inc.	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	N. of employees laid off	Geographic Distance	Interaction Absolute-Dist
T's Q 2) M_{t+3}	Pearson Correlation	1	0,813	-0,171	0,236	-0,255	0,158	-0,277	0,084	0,188	0,055	-0,052	-0,083	-0,104	0,020
	Sig. (2-tailed)		0,000	0,021	0,001	0,001	0,034	0,000	0,257	0,011	0,463	0,484	0,268	0,163	0,784
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation		1	-0,024	-0,024	-0,035	-0,011	-0,098	-0,007	0,019	-0,001	-0,031	-0,034	-0,078	0,023
	Sig. (2-tailed)			0,747	0,747	0,640	0,882	0,190	0,920	0,794	0,993	0,679	0,651	0,298	0,761
F.D.Royal Bank of Canada	Pearson Correlation			1	-0,052	-0,076	-0,024	-0,211	0,089	0,271	-0,217	0,107	-0,072	0,213	-0,066
	Sig. (2-tailed)				0,486	0,311	0,747	0,004	0,234	0,000	0,003	0,149	0,331	0,004	0,374
F.D. Saputo Inc.	Pearson Correlation				1	-0,076	-0,024	-0,211	0,079	0,158	0,142	0,086	-0,072	-0,156	0,045
	Sig. (2-tailed)					0,311	0,747	0,004	0,291	0,033	0,055	0,248	0,332	0,036	0,545
F.D. Deutsche Bank	Pearson Correlation					1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,024	0,044	0,004
	Sig. (2-tailed)						0,640	0,000	0,869	0,005	0,940	0,709	0,750	0,558	0,960
F.D. Schering	Pearson Correlation						1	0,114	0,073	-0,076	-0,032	-0,167	-0,032	0,219	-0,059
	Sig. (2-tailed)							0,126	0,326	0,305	0,670	0,024	0,664	0,003	0,426
Geographic region effect	Pearson Correlation							1	-0,244	-0,753	-0,184	-0,272	0,266	-0,011	-0,001
	Sig. (2-tailed)								0,001	0,000	0,013	0,000	0,000	0,878	0,990
TARGET gdp growth	Pearson Correlation								1	0,496	0,278	0,121	-0,236	0,165	-0,005
	Sig. (2-tailed)									0,000	0,000	0,102	0,001	0,026	0,944
HOME gdp growth	Pearson Correlation									1	0,301	0,480	-0,185	0,090	0,022
	Sig. (2-tailed)										0,000	0,000	0,012	0,227	0,769
TARGET output gap	Pearson Correlation										1	0,513	-0,020	-0,259	0,067
	Sig. (2-tailed)											0,000	0,786	0,000	0,367

HOME output gap	Pearson Correlation											1	0,020	0,031	0,131
	Sig. (2-tailed)												0,790	0,675	0,077
N. of employees laid off	Pearson Correlation												1	-0,006	0,534
	Sig. (2-tailed)													0,938	0,000
Geographic Distance	Pearson Correlation													1	-0,036
	Sig. (2-tailed)														0,625
Interaction Absolute-Dist	Pearson Correlation													-0,036	1
	Sig. (2-tailed)													0,625	

Table A.5.3.3.2 Independent variable: layoff measured relatively to total employees

ROE M_{T+3}		ROE M_{t+3}	F.D. Nortel networks corp.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	Total Share of layoffs	Geographic Distance	Interaction TotalShare-Dist
ROE M_{t+3}	Pearson Correlation	1	-0,538	-0,601	0,088	-0,139	-0,214	-0,290	-0,316	-0,237	0,082	0,029
	Sig. (2-tailed)		0,000	0,000	0,237	0,061	0,004	0,000	0,000	0,001	0,270	0,694
F.D. Nortel networks corp.	Pearson Correlation		1	-0,056	-0,307	0,134	0,241	0,166	0,130	-0,049	0,099	-0,039
	Sig. (2-tailed)			0,455	0,000	0,072	0,001	0,025	0,081	0,507	0,186	0,597
F.D. Pixelpark AG	Pearson Correlation			1	0,182	-0,062	-0,059	0,152	0,248	0,420	-0,022	-0,037
	Sig. (2-tailed)				0,014	0,407	0,426	0,041	0,001	0,000	0,768	0,622
Geographic region effect	Pearson Correlation				1	-0,244	-0,753	-0,184	-0,272	0,080	-0,011	0,009
	Sig. (2-tailed)					0,001	0,000	0,013	0,000	0,286	0,878	0,902
TARGET gdp growth	Pearson Correlation					1	0,496	0,278	0,121	-0,188	0,165	-0,094
	Sig. (2-tailed)						0,000	0,000	0,102	0,011	0,026	0,207
HOME gdp growth	Pearson Correlation						1	0,301	0,480	-0,032	0,090	-0,044
	Sig. (2-tailed)							0,000	0,000	0,671	0,227	0,552
TARGET output gap	Pearson Correlation							1	0,513	0,136	-0,259	0,062
	Sig. (2-tailed)								0,000	0,067	0,000	0,407
HOME output gap	Pearson Correlation								1	0,169	0,031	0,065
	Sig. (2-tailed)									0,023	0,675	0,385
Total Share of layoffs	Pearson Correlation									1	-0,096	-0,147
	Sig. (2-tailed)										0,198	0,048
Geographic Distance	Pearson Correlation										1	-0,181
	Sig. (2-tailed)											0,014
Interaction TotalShare-Dist	Pearson Correlation											1
	Sig. (2-tailed)											

ROA M_{T+3}		ROA M_{t+3}	F.D. Saputo Inc.	F.D. Sun Life Financial Inc.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	Total Share of layoffs	Geographic Distance	Interaction TotalShare-Dist
ROA M_{t+3}	Pearson Correlation	1	0,160	0,283	-0,750	-0,023	-0,095	-0,119	-0,257	-0,312	-0,255	0,095	0,060
	Sig. (2-tailed)		0,031	0,000	0,000	0,757	0,204	0,109	0,000	0,000	0,000	0,202	0,424
F.D. Saputo Inc.	Pearson Correlation		1	-0,024	-0,038	-0,211	0,079	0,158	0,142	0,086	-0,017	-0,156	0,037
	Sig. (2-tailed)			0,747	0,607	0,004	0,291	0,033	0,055	0,248	0,822	0,036	0,618
F.D. Sun Life Financial Inc.	Pearson Correlation			1	-0,018	-0,098	-0,009	0,044	-0,004	0,050	0,232	0,104	0,256
	Sig. (2-tailed)				0,812	0,190	0,908	0,552	0,957	0,500	0,002	0,162	0,000
F.D. Pixelpark AG	Pearson Correlation				1	0,182	-0,062	-0,059	0,152	0,248	0,420	-0,022	-0,037
	Sig. (2-tailed)					0,014	0,407	0,426	0,041	0,001	0,000	0,768	0,622
Geographic region effect	Pearson Correlation					1	-0,244	-0,753	-0,184	-0,272	0,080	-0,011	0,009
	Sig. (2-tailed)						0,001	0,000	0,013	0,000	0,286	0,878	0,902
TARGET gdp growth	Pearson Correlation						1	0,496	0,278	0,121	-0,188	0,165	-0,094
	Sig. (2-tailed)							0,000	0,000	0,102	0,011	0,026	0,207
HOME gdp growth	Pearson Correlation							1	0,301	0,480	-0,032	0,090	-0,044
	Sig. (2-tailed)								0,000	0,000	0,671	0,227	0,552
TARGET output gap	Pearson Correlation								1	0,513	0,136	-0,259	0,062
	Sig. (2-tailed)									0,000	0,067	0,000	0,407
HOME output gap	Pearson Correlation									1	0,169	0,031	0,065
	Sig. (2-tailed)										0,023	0,675	0,385
Total Share of layoffs	Pearson Correlation										1	-0,096	-0,147
	Sig. (2-tailed)											0,198	0,048
Geographic Distance	Pearson Correlation											1	-0,181
	Sig. (2-tailed)												0,014
Interaction TotalShare-Dist	Pearson Correlation												1
	Sig. (2-tailed)												

TOBIN'S Q 1) M_{T+3}		T's Q 1) M_{t+3}	F.D. ATS Automation Tooling Systems Inc	F.D. Quebecor inc.	F.D.Royal Bank of Canada	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	Total Share of layoffs	Geographic Distance	Interaction TotalShare-Dist
T's Q 1) M_{t+3}	Pearson Correlation	1	0,837	-0,167	-0,185	-0,211	0,214	-0,083	0,030	0,039	0,026	-0,094	0,069	-0,070	-0,055
	Sig. (2-tailed)		0,000	0,024	0,013	0,004	0,004	0,268	0,683	0,602	0,729	0,207	0,356	0,350	0,459
F.D. ATS Inc	Pearson Correlation		1	-0,030	-0,024	-0,035	-0,011	-0,098	-0,007	0,019	-0,001	-0,031	0,040	-0,078	-0,021
	Sig. (2-tailed)			0,683	0,747	0,640	0,882	0,190	0,920	0,794	0,993	0,679	0,594	0,298	0,783
F.D. Quebecor inc.	Pearson Correlation			1	-0,066	-0,096	-0,030	-0,267	0,087	0,205	0,224	0,191	-0,098	-0,157	0,098
	Sig. (2-tailed)				0,377	0,199	0,683	0,000	0,243	0,006	0,002	0,010	0,187	0,035	0,186
F.D.Royal Bank of Canada	Pearson Correlation				1	-0,076	-0,024	-0,211	0,089	0,271	-0,217	0,107	-0,141	0,213	-0,139
	Sig. (2-tailed)					0,311	0,747	0,004	0,234	0,000	0,003	0,149	0,058	0,004	0,062
F.D. Deutsche Bank	Pearson Correlation					1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,009	0,044	0,024
	Sig. (2-tailed)						0,640	0,000	0,869	0,005	0,940	0,709	0,900	0,558	0,743
F.D. Schering	Pearson Correlation						1	0,114	0,073	-0,076	-0,032	-0,167	-0,049	0,219	-0,097
	Sig. (2-tailed)							0,126	0,326	0,305	0,670	0,024	0,515	0,003	0,195
Geographic region effect	Pearson Correlation							1	-0,244	-0,753	-0,184	-0,272	0,080	-0,011	0,009
	Sig. (2-tailed)								0,001	0,000	0,013	0,000	0,286	0,878	0,902

TARGET gdp growth	Pearson Correlation								1	0,496	0,278	0,121	-0,188	0,165	-0,094
	Sig. (2-tailed)									0,000	0,000	0,102	0,011	0,026	0,207
HOME gdp growth	Pearson Correlation									1	0,301	0,480	-0,032	0,090	-0,044
	Sig. (2-tailed)										0,000	0,000	0,671	0,227	0,552
TARGET output gap	Pearson Correlation										1	0,513	0,136	-0,259	0,062
	Sig. (2-tailed)											0,000	0,067	0,000	0,407
HOME output gap	Pearson Correlation											1	0,169	0,031	0,065
	Sig. (2-tailed)												0,023	0,675	0,385
Total Share of layoffs	Pearson Correlation												1	-0,096	-0,147
	Sig. (2-tailed)													0,198	0,048
Geographic Distance	Pearson Correlation													1	-0,181
	Sig. (2-tailed)														0,014
Interaction TotalShare-Dist	Pearson Correlation														1
	Sig. (2-tailed)														

TOBIN'S Q 2) M_{T+3}		T's Q 2) M_{t+3}	F.D. ATS Automation Tooling Systems Inc	F.D.Royal Bank of Canada	F.D. Saputo Inc.	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	Total Share of layoffs	Geographic Distance	Interaction TotalShare-Dist
T's Q 2) M_{t+3}	Pearson Correlation	1	0,813	-0,171	0,236	-0,255	0,158	-0,277	0,084	0,188	0,055	-0,052	0,023	-0,104	-0,048
	Sig. (2-tailed)		0,000	0,021	0,001	0,001	0,034	0,000	0,257	0,011	0,463	0,484	0,755	0,163	0,517
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation		1	-0,024	-0,024	-0,035	-0,011	-0,098	-0,007	0,019	-0,001	-0,031	0,040	-0,078	-0,021
	Sig. (2-tailed)			0,747	0,747	0,640	0,882	0,190	0,920	0,794	0,993	0,679	0,594	0,298	0,783
F.D.Royal Bank of Canada	Pearson Correlation			1	-0,052	-0,076	-0,024	-0,211	0,089	0,271	-0,217	0,107	-0,141	0,213	-0,139
	Sig. (2-tailed)				0,486	0,311	0,747	0,004	0,234	0,000	0,003	0,149	0,058	0,004	0,062
F.D. Saputo Inc.	Pearson Correlation				1	-0,076	-0,024	-0,211	0,079	0,158	0,142	0,086	-0,017	-0,156	0,037
	Sig. (2-tailed)					0,311	0,747	0,004	0,291	0,033	0,055	0,248	0,822	0,036	0,618
F.D. Deutsche Bank	Pearson Correlation					1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,009	0,044	0,024
	Sig. (2-tailed)						0,640	0,000	0,869	0,005	0,940	0,709	0,900	0,558	0,743
F.D. Schering	Pearson Correlation						1	0,114	0,073	-0,076	-0,032	-0,167	-0,049	0,219	-0,097
	Sig. (2-tailed)							0,126	0,326	0,305	0,670	0,024	0,515	0,003	0,195
Geographic region effect	Pearson Correlation							1	-0,244	-0,753	-0,184	-0,272	0,080	-0,011	0,009
	Sig. (2-tailed)								0,001	0,000	0,013	0,000	0,286	0,878	0,902
TARGET gdp growth	Pearson Correlation								1	0,496	0,278	0,121	-0,188	0,165	-0,094
	Sig. (2-tailed)									0,000	0,000	0,102	0,011	0,026	0,207
HOME gdp growth	Pearson Correlation									1	0,301	0,480	-0,032	0,090	-0,044
	Sig. (2-tailed)										0,000	0,000	0,671	0,227	0,552
TARGET output gap	Pearson Correlation										1	0,513	0,136	-0,259	0,062
	Sig. (2-tailed)											0,000	0,067	0,000	0,407
HOME output gap	Pearson Correlation											1	0,169	0,031	0,065
	Sig. (2-tailed)												0,023	0,675	0,385
Total Share of layoffs	Pearson Correlation												1	-0,096	-0,147
	Sig. (2-tailed)													0,198	0,048
Geographic Distance	Pearson Correlation													1	-0,181
	Sig. (2-tailed)														0,014
Interaction TotalShare-Dist	Pearson Correlation														1
	Sig. (2-tailed)														

Table A.5.3.3.3 Independent variable: layoff measured relatively to local employees

ROE M_{T+3}		ROE M_{t+3}	F.D. Nortel networks corp.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	Local Share of layoffs	Geographic Distance	Interaction LocalShare-Dist
ROE M_{t+3}	Pearson Correlation	1	-0,538	-0,601	0,088	-0,139	-0,214	-0,290	-0,316	-0,195	0,082	0,047
	Sig. (2-tailed)		0,000	0,000	0,237	0,061	0,004	0,000	0,000	0,009	0,270	0,526
F.D. Nortel networks corp.	Pearson Correlation		1	-0,056	-0,307	0,134	0,241	0,166	0,130	-0,070	0,099	-0,067
	Sig. (2-tailed)			0,455	0,000	0,072	0,001	0,025	0,081	0,348	0,186	0,370
F.D. Pixelpark AG	Pearson Correlation			1	0,182	-0,062	-0,059	0,152	0,248	0,429	-0,022	0,001
	Sig. (2-tailed)				0,014	0,407	0,426	0,041	0,001	0,000	0,768	0,988
Geographic region effect	Pearson Correlation				1	-0,244	-0,753	-0,184	-0,272	0,028	-0,011	-0,171
	Sig. (2-tailed)					0,001	0,000	0,013	0,000	0,710	0,878	0,021
TARGET gdp growth	Pearson Correlation					1	0,496	0,278	0,121	0,259	0,165	0,230
	Sig. (2-tailed)						0,000	0,000	0,102	0,000	0,026	0,002
HOME gdp growth	Pearson Correlation						1	0,301	0,480	0,127	0,090	0,330
	Sig. (2-tailed)							0,000	0,000	0,089	0,227	0,000
TARGET output gap	Pearson Correlation							1	0,513	-0,045	-0,259	-0,154
	Sig. (2-tailed)								0,000	0,545	0,000	0,038
HOME output gap	Pearson Correlation								1	0,189	0,031	0,123
	Sig. (2-tailed)									0,011	0,675	0,099
Local Share of layoffs	Pearson Correlation									1	0,389	0,640
	Sig. (2-tailed)										0,000	0,000
Geographic Distance	Pearson Correlation										1	0,327
	Sig. (2-tailed)											0,000
Interaction LocalShare-Dist	Pearson Correlation											1
	Sig. (2-tailed)											

ROA M_{T+3}		ROA M_{t+3}	F.D. Nortel networks corp.	F.D. Saputo Inc.	F.D. Sun Life Financial Inc.	F.D. Pixelpark AG	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	Local Share of layoffs	Geographic Distance	Interaction LocalShare-Dist
ROA M_{t+3}	Pearson Correlation	1	-0,289	0,160	0,283	-0,750	-0,023	-0,095	-0,119	-0,257	-0,312	-0,252	0,095	0,021
	Sig. (2-tailed)		0,000	0,031	0,000	0,000	0,757	0,204	0,109	0,000	0,000	0,001	0,202	0,781
F.D. Nortel networks corp.	Pearson Correlation		1	-0,076	-0,035	-0,056	-0,307	0,134	0,241	0,166	0,130	-0,070	0,099	-0,067
	Sig. (2-tailed)			0,311	0,640	0,455	0,000	0,072	0,001	0,025	0,081	0,348	0,186	0,370
F.D. Saputo Inc.	Pearson Correlation			1	-0,024	-0,038	-0,211	0,079	0,158	0,142	0,086	-0,105	-0,156	-0,009
	Sig. (2-tailed)				0,747	0,607	0,004	0,291	0,033	0,055	0,248	0,158	0,036	0,903
F.D. Sun Life Financial Inc.	Pearson Correlation				1	-0,018	-0,098	-0,009	0,044	-0,004	0,050	0,220	0,104	0,108
	Sig. (2-tailed)					0,812	0,190	0,908	0,552	0,957	0,500	0,003	0,162	0,148
F.D. Pixelpark AG	Pearson Correlation					1	0,182	-0,062	-0,059	0,152	0,248	0,429	-0,022	0,001
	Sig. (2-tailed)						0,014	0,407	0,426	0,041	0,001	0,000	0,768	0,988
Geographic region effect	Pearson Correlation						1	-0,244	-0,753	-0,184	-0,272	0,028	-0,011	-0,171
	Sig. (2-tailed)							0,001	0,000	0,013	0,000	0,710	0,878	0,021
TARGET gdp growth	Pearson Correlation							1	0,496	0,278	0,121	0,259	0,165	0,230
	Sig. (2-tailed)								0,000	0,000	0,102	0,000	0,026	0,002
HOME gdp growth	Pearson Correlation								1	0,301	0,480	0,127	0,090	0,330
	Sig. (2-tailed)									0,000	0,000	0,089	0,227	0,000
TARGET output gap	Pearson Correlation									1	0,513	-0,045	-0,259	-0,154
	Sig. (2-tailed)										0,000	0,545	0,000	0,038

HOME output gap	Pearson Correlation										1	0,189	0,031	0,123
	Sig. (2-tailed)											0,011	0,675	0,099
Local Share of layoffs	Pearson Correlation											1	0,389	0,640
	Sig. (2-tailed)												0,000	0,000
Geographic Distance	Pearson Correlation												1	0,327
	Sig. (2-tailed)													0,000
Interaction LocalShare-Dist	Pearson Correlation													1
	Sig. (2-tailed)													

TOBIN'S Q 1) M_{T+3}		T's Q 1) M_{t+3}	F.D. ATS Automation Tooling Systems Inc	F.D. Quebecor inc.	F.D.Royal Bank of Canada	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	Local Share of layoffs	Geographic Distance	Interaction LocalShare-Dist
T's Q 1) M_{t+3}	Pearson Correlation	1	0,837	-0,167	-0,185	-0,211	0,214	-0,083	0,030	0,039	0,026	-0,094	-0,102	-0,070	-0,131
	Sig. (2-tailed)		0,000	0,024	0,013	0,004	0,004	0,268	0,683	0,602	0,729	0,207	0,170	0,350	0,079
F.D. ATS Inc	Pearson Correlation		1	-0,030	-0,024	-0,035	-0,011	-0,098	-0,007	0,019	-0,001	-0,031	-0,039	-0,078	-0,007
	Sig. (2-tailed)			0,683	0,747	0,640	0,882	0,190	0,920	0,794	0,993	0,679	0,600	0,298	0,921
F.D. Quebecor inc.	Pearson Correlation			1	-0,066	-0,096	-0,030	-0,267	0,087	0,205	0,224	0,191	-0,141	-0,157	-0,017
	Sig. (2-tailed)				0,377	0,199	0,683	0,000	0,243	0,006	0,002	0,010	0,057	0,035	0,822
F.D.Royal Bank of Canada	Pearson Correlation				1	-0,076	-0,024	-0,211	0,089	0,271	-0,217	0,107	0,266	0,213	0,551
	Sig. (2-tailed)					0,311	0,747	0,004	0,234	0,000	0,003	0,149	0,000	0,004	0,000
F.D. Deutsche Bank	Pearson Correlation					1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,000	0,044	-0,088
	Sig. (2-tailed)						0,640	0,000	0,869	0,005	0,940	0,709	0,999	0,558	0,236
F.D. Schering	Pearson Correlation						1	0,114	0,073	-0,076	-0,032	-0,167	-0,030	0,219	-0,063
	Sig. (2-tailed)							0,126	0,326	0,305	0,670	0,024	0,690	0,003	0,401
Geographic region effect	Pearson Correlation							1	-0,244	-0,753	-0,184	-0,272	0,028	-0,011	-0,171
	Sig. (2-tailed)								0,001	0,000	0,013	0,000	0,710	0,878	0,021
TARGET gdp growth	Pearson Correlation								1	0,496	0,278	0,121	0,259	0,165	0,230
	Sig. (2-tailed)									0,000	0,000	0,102	0,000	0,026	0,002
HOME gdp growth	Pearson Correlation									1	0,301	0,480	0,127	0,090	0,330
	Sig. (2-tailed)										0,000	0,000	0,089	0,227	0,000
TARGET output gap	Pearson Correlation										1	0,513	-0,045	-0,259	-0,154
	Sig. (2-tailed)											0,000	0,545	0,000	0,038
HOME output gap	Pearson Correlation											1	0,189	0,031	0,123
	Sig. (2-tailed)												0,011	0,675	0,099
Local Share of layoffs	Pearson Correlation												1	0,389	0,640
	Sig. (2-tailed)													0,000	0,000
Geographic Distance	Pearson Correlation													1	0,327
	Sig. (2-tailed)														0,000
Interaction LocalShare-Dist	Pearson Correlation														1
	Sig. (2-tailed)														

TOBIN'S Q 2) M_{T+3}		T's Q 2) M_{t+3}	F.D. ATS Automation Tooling Systems Inc	F.D.Royal Bank of Canada	F.D. Saputo Inc.	F.D. Deutsche Bank	F.D. Schering	Geographic region effect	TARGET gdp growth	HOME gdp growth	TARGET output gap	HOME output gap	Local Share of layoffs	Geographic Distance	Interaction LocalShare-Dist
T's Q 2) M_{t+3}	Pearson Correlation	1	0,813	-0,171	0,236	-0,255	0,158	-0,277	0,084	0,188	0,055	-0,052	-0,173	-0,104	-0,112
	Sig. (2-tailed)		0,000	0,021	0,001	0,001	0,034	0,000	0,257	0,011	0,463	0,484	0,019	0,163	0,131
F.D. ATS Automation Tooling Systems Inc	Pearson Correlation		1	-0,024	-0,024	-0,035	-0,011	-0,098	-0,007	0,019	-0,001	-0,031	-0,039	-0,078	-0,007
	Sig. (2-tailed)			0,747	0,747	0,640	0,882	0,190	0,920	0,794	0,993	0,679	0,600	0,298	0,921
F.D.Royal Bank of Canada	Pearson Correlation			1	-0,052	-0,076	-0,024	-0,211	0,089	0,271	-0,217	0,107	0,266	0,213	0,551
	Sig. (2-tailed)				0,486	0,311	0,747	0,004	0,234	0,000	0,003	0,149	0,000	0,004	0,000
F.D. Saputo Inc.	Pearson Correlation				1	-0,076	-0,024	-0,211	0,079	0,158	0,142	0,086	-0,105	-0,156	-0,009
	Sig. (2-tailed)					0,311	0,747	0,004	0,291	0,033	0,055	0,248	0,158	0,036	0,903
F.D. Deutsche Bank	Pearson Correlation					1	-0,035	0,358	0,012	-0,208	-0,006	0,028	0,000	0,044	-0,088
	Sig. (2-tailed)						0,640	0,000	0,869	0,005	0,940	0,709	0,999	0,558	0,236
F.D. Schering	Pearson Correlation						1	0,114	0,073	-0,076	-0,032	-0,167	-0,030	0,219	-0,063
	Sig. (2-tailed)							0,126	0,326	0,305	0,670	0,024	0,690	0,003	0,401
Geographic region effect	Pearson Correlation							1	-0,244	-0,753	-0,184	-0,272	0,028	-0,011	-0,171
	Sig. (2-tailed)								0,001	0,000	0,013	0,000	0,710	0,878	0,021
TARGET gdp growth	Pearson Correlation								1	0,496	0,278	0,121	0,259	0,165	0,230
	Sig. (2-tailed)									0,000	0,000	0,102	0,000	0,026	0,002
HOME gdp growth	Pearson Correlation									1	0,301	0,480	0,127	0,090	0,330
	Sig. (2-tailed)										0,000	0,000	0,089	0,227	0,000
TARGET output gap	Pearson Correlation										1	0,513	-0,045	-0,259	-0,154
	Sig. (2-tailed)											0,000	0,545	0,000	0,038
HOME output gap	Pearson Correlation											1	0,189	0,031	0,123
	Sig. (2-tailed)												0,011	0,675	0,099
Local Share of layoffs	Pearson Correlation												1	0,389	0,640
	Sig. (2-tailed)													0,000	0,000
Geographic Distance	Pearson Correlation													1	0,327
	Sig. (2-tailed)														0,000
Interaction LocalShare-Dist	Pearson Correlation														1
	Sig. (2-tailed)														

For Appendices 5.3.2 and 5.3.3: N= 182, for all variables

Appendix 5.4 Multicollinearity control for all models

This appendix is of illustrative purpose only. As a matter of fact, only one dependent variable per group of hypotheses' testing is presented. The reason for presenting only one variable per group lies in the fact that the regressions' results for each group of tests are similar. In the specific, the VIF scores of all variables analyzed demonstrate similar dependent relationships (multicollinearity) with each group of dependent variables.

Appendix 5.4.1 MULTICOLLINEARITY CONTROL FOR HYPOTHESES 1 AND 2

BEFORE SELECTION

Model summary (absolute numbers)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,690(a)	,477	,420	1,21725

a Predictors: (Constant), HOME output gap, F.D. Deutsche Bank, Geographic Distance (km) -country specific-, F.D. Agrium inc., F.D. CHC helicopter corp., F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D.Royal Bank of Canada, TARGET gdp growth, F.D. Deutsche Telekom, F.D. Saputo Inc., Firm geographic dispersion, ROA t, dummy home-abroad layoff, FS (LN) t-1, TARGET output gap, Geographic region effect, HOME gdp growth, FS t-1, ROE t

ANOVA (absolute numbers)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	248,339	20	12,417	8,380	,000(a)
	Residual	272,631	184	1,482		
	Total	520,970	204			

a Predictors: (Constant), HOME output gap, F.D. Deutsche Bank, Geographic Distance (km) -country specific-, F.D. Agrium inc., F.D. CHC helicopter corp., F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D.Royal Bank of Canada, TARGET gdp growth, F.D. Deutsche Telekom, F.D. Saputo Inc., Firm geographic dispersion, ROA t, dummy home-abroad layoff, FS (LN) t-1, TARGET output gap, Geographic region effect, HOME gdp growth, FS t-1, ROE t
b Dependent Variable: logAmount

Coefficients (absolute numbers)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	6,174	,920		6,709	,000		
F.D. Agrium inc.	-1,365	,443	-,184	-3,081	,002	,793	1,261
F.D. CHC helicopter corp.	-1,494	,757	-,113	-1,974	,050	,875	1,142
F.D.Royal Bank of Canada	-1,838	,581	-,248	-3,163	,002	,461	2,167
F.D. Saputo Inc.	-,593	,448	-,091	-1,324	,187	,606	1,649
F.D. DaimlerChrysler AG	2,646	,923	,163	2,867	,005	,878	1,139
F.D. Deutsche Bank	,287	,478	,051	,601	,549	,396	2,527
F.D. Deutsche Telekom	1,678	,543	,204	3,093	,002	,655	1,527
F.D. Pixelpark AG	-,226	5,441	-,022	-,042	,967	,010	97,458
dummy home-abroad layoff	-,617	,251	-,184	-2,458	,015	,510	1,960
Geographic Distance (km) -country specific-	4,45E-005	,000	,090	1,215	,226	,514	1,944

ROE t	,101	,415	,179	,243	,808	,005	189,317
ROA t	-,022	1,732	-,004	-,013	,990	,034	29,397
FS t-1	,235	,168	,318	1,401	,163	,055	18,130
FS (LN) t-1	-1,018	,769	-,191	-1,323	,187	,136	7,334
Geographic region effect	,556	,365	,173	1,522	,130	,221	4,533
Firm geographic dispersion	,001	,002	,025	,320	,749	,466	2,147
TARGET gdp growth	-26,429	7,354	-,258	-3,594	,000	,552	1,811
HOME gdp growth	14,178	10,807	,137	1,312	,191	,259	3,854
TARGET output gap	30,315	11,183	,215	2,711	,007	,453	2,206
HOME output gap	-6,811	13,351	-,043	-,510	,611	,393	2,542

a Dependent Variable: LogAbsolute Value

AFTER SELECTION

Model summary (absolute numbers)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,686(a)	,470	,419	1,21790

a Predictors: (Constant), HOME output gap, F.D. Deutsche Bank, Geographic Distance (km) -country specific-, F.D. Agrium inc., F.D. CHC helicopter corp., F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D.Royal Bank of Canada, TARGET gdp growth, F.D. Deutsche Telekom, F.D. Saputo Inc., Firm geographic dispersion, ROA t, dummy home-abroad layoff, FS (LN) t-1, TARGET output gap, Geographic region effect, HOME gdp growth

ANOVA (absolute numbers)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	245,079	18	13,616	9,179	,000(a)
	Residual	275,891	186	1,483		
	Total	520,970	204			

a Predictors: (Constant), HOME output gap, F.D. Deutsche Bank, Geographic Distance (km) -country specific-, F.D. Agrium inc., F.D. CHC helicopter corp., F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D.Royal Bank of Canada, TARGET gdp growth, F.D. Deutsche Telekom, F.D. Saputo Inc., Firm geographic dispersion, ROA t, dummy home-abroad layoff, FS (LN) t-1, TARGET output gap, Geographic region effect, HOME gdp growth
b Dependent Variable: logAmount

Coefficients (absolute numbers)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	6,265	,917		6,834	,000		
F.D. Agrium inc.	-1,551	,421	-,210	-3,683	,000	,879	1,138
F.D. CHC helicopter corp.	-1,748	,735	-,132	-2,377	,018	,928	1,078
F.D.Royal Bank of Canada	-1,351	,474	-,183	-2,853	,005	,695	1,438
F.D. Saputo Inc.	-,840	,416	-,128	-2,017	,045	,703	1,422

F.D. DaimlerChrysler AG	2,900	,907	,179	3,196	,002	,910	1,099
F.D. Deutsche Bank	,759	,353	,135	2,150	,033	,724	1,382
F.D. Deutsche Telekom	1,942	,510	,236	3,806	,000	,741	1,349
F.D. Pixelpark AG	-2,329	,858	-,225	-2,713	,007	,413	2,423
dummy home-abroad layoff	-,574	,247	-,171	-2,326	,021	,528	1,895
Geographic Distance	4,17E-005	,000	,085	1,151	,251	,524	1,908
ROA t	,248	,436	,041	,570	,569	,537	1,861
FS (LN) t-1	-,085	,394	-,016	-,216	,829	,521	1,919
Geographic region effect	,669	,334	,208	2,001	,047	,263	3,798
Firm geographic dispersion	,002	,002	,062	,846	,399	,533	1,877
TARGET gdp growth	-26,731	7,344	-,261	-3,640	,000	,554	1,804
HOME gdp growth	13,196	10,758	,128	1,227	,222	,262	3,815
TARGET output gap	30,301	11,179	,215	2,711	,007	,454	2,202
HOME output gap	-2,685	12,994	-,017	-,207	,837	,416	2,405

a Dependent Variable: LogAbsolute Value

Appendix 5.4.2 MULTICOLLINEARITY CONTROL FOR HYPOTHESIS 3 AND ADDITIONAL ANALYSIS HP 3

(Last 3 Years)

BEFORE SELECTION

Model summary (ROE last 3 years)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,952(a)	,907	,899	,059852200

a Predictors: (Constant), Geographic region effect, F.D. Sun Life Financial Inc., F.D. Nova Chemicals Corp., F.D. ATS Automation Tooling Systems Inc, F.D. Celstica Inc., F.D. Pixelpark AG, TARGET gdp growth, F.D. Quebecor inc., TARGET output gap, F.D. Nortel networks corp., ABROAD / TOT layoff, HOME output gap, frq ABROAD/TOT, HOME gdp growth

ANOVA (ROE last 3 years)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,849	14	,418	116,629	,000(a)
	Residual	,598	167	,004		
	Total	6,447	181			

a Predictors: (Constant), HOME output gap, F.D. Celstica Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Sun Life Financial Inc., F.D. Nortel networks corp., TARGET gdp growth, F.D. Quebecor inc., F.D. Pixelpark AG, ABROAD / TOT layoff, Geographic region effect, TARGET output gap, frq ABROAD/TOT, HOME gdp growth

b Dependent Variable: ROE LAST 3

Coefficients (ROE last 3 years)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	,077	,020		3,778	,000		
F.D. ATS Automation Tooling Systems Inc	-,227	,045	-,126	-5,025	,000	,885	1,130
F.D. Celstica Inc.	-,346	,027	-,328	-12,814	,000	,847	1,180
F.D. Nortel networks corp.	,400	,017	,635	23,981	,000	,793	1,262
F.D. Nova Chemicals Corp.	-,480	,044	-,266	-10,988	,000	,951	1,052

F.D. Quebecor inc.	-,258	,021	-,365	-12,189	,000	,620	1,614
F.D. Sun Life Financial Inc.	,156	,049	,086	3,153	,002	,743	1,347
F.D. Pixelpark AG	-,180	,029	-,157	-6,125	,000	,850	1,176
ABROAD / TOT layoff	-,067	,023	-,104	-2,884	,004	,425	2,355
frq ABROAD/TOT	,157	,031	,192	5,023	,000	,382	2,618
Geographic region effect	-,057	,017	-,150	-3,237	,001	,259	3,857
TARGET gdp growth	,139	,358	,012	,390	,697	,596	1,677
HOME gdp growth	-,003	,573	,000	-,005	,996	,235	4,253
TARGET output gap	-,367	,549	-,020	-,668	,505	,619	1,617
HOME output gap	1,315	,674	,065	1,951	,053	,507	1,973

a Dependent Variable: ROE LAST 3

AFTER SELECTION

Model summary (ROE last 3 years)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,952(a)	,907	,900	,059673807

a Predictors: (Constant), frq ABROAD/TOT, HOME output gap, TARGET gdp growth, F.D. Nova Chemicals Corp., F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. Nortel networks corp., F.D. Pixelpark AG, F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., Geographic region effect, TARGET output gap, ABROAD / TOT layoff

ANOVA (ROE last 3 years)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,849	13	,450	126,353	,000(a)
	Residual	,598	168	,004		
	Total	6,447	181			

a Predictors: (Constant), frq ABROAD/TOT, HOME output gap, TARGET gdp growth, F.D. Nova Chemicals Corp., F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. Nortel networks corp., F.D. Pixelpark AG, F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., Geographic region effect, TARGET output gap, ABROAD / TOT layoff
b Dependent Variable: ROE LAST 3

Coefficients (ROE last 3 years)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	,077	,017		4,601	,000		
F.D. ATS Automation Tooling Systems Inc	-,227	,045	-,126	-5,049	,000	,888	1,126
F.D. Celstica Inc.	-,346	,026	-,328	-13,277	,000	,904	1,106
F.D. Nortel networks corp.	,400	,017	,635	24,166	,000	,800	1,250
F.D. Nova Chemicals Corp.	-,480	,044	-,266	-11,021	,000	,951	1,052
F.D. Quebecor inc.	-,258	,021	-,365	-12,319	,000	,629	1,589
F.D. Sun Life Financial Inc.	,156	,049	,086	3,167	,002	,745	1,343
F.D. Pixelpark AG	-,180	,029	-,157	-6,144	,000	,850	1,176

ABROAD / TOT layoff	-,067	,023	-,104	-2,900	,004	,427	2,343
frq ABROAD/TOT	,157	,031	,192	5,038	,000	,382	2,618
Geographic region effect	-,057	,013	-,150	-4,422	,000	,482	2,074
TARGET gdp growth	,138	,302	,012	,458	,647	,831	1,203
TARGET output gap	-,367	,547	-,020	-,671	,503	,619	1,614
HOME output gap	1,314	,610	,065	2,156	,033	,616	1,622

a Dependent Variable: ROE LAST 3

(T+1)

BEFORE SELECTION

Model summary (ROE t+1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,805(a)	,649	,630	,472274418

a Predictors: (Constant), HOME output gap, year frq TOT AMOUNT, F.D. Nortel networks corp., x year ABROAD / TOT layoff, TARGET gdp growth, F.D. Pixelpark AG, Geographic region effect, TARGET output gap, HOME gdp growth

ANOVA (ROE t+1)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	70,824	9	7,869	35,281	,000(a)
	Residual	38,363	172	,223		
	Total	109,187	181			

a Predictors: (Constant), HOME output gap, year frq TOT AMOUNT, F.D. Nortel networks corp., x year ABROAD / TOT layoff, TARGET gdp growth, F.D. Pixelpark AG, Geographic region effect, TARGET output gap, HOME gdp growth
b Dependent Variable: ROE t+1

Coefficients (ROE t+1)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	,041	,136		,302	,763		
F.D. Nortel networks corp.	-1,080	,125	-,416	-8,675	,000	,887	1,128
F.D. Pixelpark AG	-3,109	,231	-,656	-13,451	,000	,859	1,164
TARGET gdp growth	-1,504	2,731	-,031	-,551	,582	,638	1,568
HOME gdp growth	-2,271	4,348	-,047	-,522	,602	,254	3,932
TARGET output gap	-3,702	4,274	-,049	-,866	,388	,636	1,573
HOME output gap	-5,853	5,321	-,070	-1,100	,273	,507	1,974
Geographic region effect	-,117	,122	-,075	-,963	,337	,334	2,996
x year ABROAD / TOT layoff	,014	,145	,007	,098	,922	,420	2,381
year frq ABROAD/TOT	,225	,171	,095	1,317	,190	,392	2,548

a Dependent Variable: ROE t+1

AFTER SELECTION

Model summary (ROE t+1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,805(a)	,648	,632	,471280728

a Predictors: (Constant), HOME output gap, year frq TOT AMOUNT, F.D. Nortel networks corp., x year ABROAD / TOT layoff, TARGET gdp growth, F.D. Pixelpark AG, Geographic region effect, TARGET output gap

ANOVA (ROE t+1)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	70,763	8	8,845	39,825	,000(a)
	Residual	38,424	173	,222		
	Total	109,187	181			

a Predictors: (Constant), HOME output gap, year frq TOT AMOUNT, F.D. Nortel networks corp., x year ABROAD / TOT layoff, TARGET gdp growth, F.D. Pixelpark AG, Geographic region effect, TARGET output gap
b Dependent Variable: ROE t+1

Coefficients (ROE t+1)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-,006	,102		-,055	,956		
F.D. Nortel networks corp.	-1,078	,124	-,415	-8,679	,000	,888	1,126
F.D. Pixelpark AG	-3,109	,231	-,656	-13,481	,000	,859	1,164
TARGET gdp growth	-2,244	2,329	-,047	-,964	,337	,873	1,146
TARGET output gap	-3,487	4,245	-,046	-,821	,413	,642	1,559
HOME output gap	-7,081	4,763	-,085	-1,487	,139	,630	1,588
Geographic region effect	-,073	,086	-,047	-,839	,402	,657	1,522
x year ABROAD / TOT layoff	,019	,145	,009	,129	,897	,421	2,373
year frq ABROAD/TOT	,224	,171	,094	1,311	,191	,393	2,548

a Dependent Variable: ROE t+1

Appendix 5.4.3 MULTICOLLINEARITY CONTROL FOR HYPOTHESIS 4 AND ADDITIONAL ANALYSIS HP 3

BEFORE SELECTION

Model summary (ROE post layoff average 3 years)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,865(a)	,748	,734	,219912086

a Predictors: (Constant), HOME output gap, year frq HOME AMOUNT, TARGET gdp growth, F.D. Nortel networks corp., F.D. Pixelpark AG, x year ABROAD / TOT layoff, Geographic region effect, TARGET output gap, HOME gdp growth

ANOVA (ROE post layoff average 3 years)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24,628	9	2,736	56,582	,000(a)
	Residual	8,318	172	,048		
	Total	32,946	181			

a Predictors: (Constant), HOME output gap, year frq HOME AMOUNT, TARGET gdp growth, F.D. Nortel networks corp., F.D. Pixelpark AG, x year ABROAD / TOT layoff, Geographic region effect, TARGET output gap, HOME gdp growth
b Dependent Variable: ROE postL average 3

Coefficients (ROE post layoff average 3 years)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	,060	,063		,948	,345		
F.D. Nortel networks corp.	-,780	,058	-,547	-13,447	,000	,887	1,128
F.D. Pixelpark AG	-1,606	,108	-,617	-14,927	,000	,859	1,164
TARGET gdp growth	-,919	1,272	-,035	-,723	,471	,638	1,568
HOME gdp growth	-3,961	2,025	-,149	-1,957	,052	,254	3,932
TARGET output gap	-,393	1,990	-,009	-,197	,844	,636	1,573
HOME output gap	-2,658	2,478	-,058	-1,073	,285	,507	1,974
Geographic region effect	-,120	,057	-,141	-2,127	,035	,334	2,996
year frq ABROAD/TOT	,209	,080	,161	2,627	,009	,392	2,548
x year ABROAD / TOT layoff	,049	,068	,042	,718	,474	,420	2,381

a Dependent Variable: ROE postL average 3

AFTER SELECTION

Model summary (ROE post layoff average 3 years)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,861(a)	,742	,730	,221702660

a Predictors: (Constant), HOME output gap, year frq HOME AMOUNT, TARGET gdp growth, F.D. Nortel networks corp., F.D. Pixelpark AG, x year ABROAD / TOT layoff, Geographic region effect, TARGET output gap

ANOVA (ROE post layoff average 3 years)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24,442	8	3,055	62,160	,000(a)
	Residual	8,503	173	,049		
	Total	32,946	181			

a Predictors: (Constant), HOME output gap, year frq HOME AMOUNT, TARGET gdp growth, F.D. Nortel networks corp., F.D. Pixelpark AG, x year ABROAD / TOT layoff, Geographic region effect, TARGET output gap
b Dependent Variable: ROE postL average 3

Coefficients (ROE post layoff average 3 years)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,021	,048		-,446	,656		
	F.D. Nortel networks corp.	-,775	,058	-,544	-13,272	,000	,888	1,126
	F.D. Pixelpark AG	-1,607	,108	-,617	-14,811	,000	,859	1,164
	TARGET gdp growth	-2,210	1,096	-,083	-2,017	,045	,873	1,146
	TARGET output gap	-,018	1,997	,000	-,009	,993	,642	1,559
	HOME output gap	-4,801	2,241	-,104	-2,143	,034	,630	1,588
	Geographic region effect	-,043	,041	-,050	-1,050	,295	,657	1,522
	year frq ABROAD/TOT	,207	,080	,159	2,576	,011	,393	2,548
	x year ABROAD / TOT layoff	,056	,068	,049	,827	,409	,421	2,373

a Dependent Variable: ROE postL average 3

Appendix 5.5 SPSS outputs hypothesis 1

This appendix contains more comprehensive SPSS outputs regarding hypothesis one. Each section presents one of the three dimensions of layoff size assessed as dependent variables.

Appendix 5.5.1 LAYOFF SIZE IN ABSOLUTE NUMBERS

Model summary (absolute numbers)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,624(a)	,389	,361	1,27734
2	,652(b)	,425	,395	1,24291
3	,666(c)	,444	,412	1,22542
4	,677(d)	,459	,425	1,21189

a Predictors: (Constant), dummy home-abroad layoff, F.D. CHC helicopter corp., F.D. Deutsche Telekom, F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D. Agrium inc., F.D. Deutsche Bank, F.D.Royal Bank of Canada, F.D. Saputo Inc.
b Predictors: (Constant), dummy home-abroad layoff, F.D. CHC helicopter corp., F.D. Deutsche Telekom, F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D. Agrium inc., F.D. Deutsche Bank, F.D.Royal Bank of Canada, F.D. Saputo Inc., TARGET gdp growth
c Predictors: (Constant), dummy home-abroad layoff, F.D. CHC helicopter corp., F.D. Deutsche Telekom, F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D. Agrium inc., F.D. Deutsche Bank, F.D.Royal Bank of Canada, F.D. Saputo Inc., TARGET gdp growth, TARGET output gap
d Predictors: (Constant), dummy home-abroad layoff, F.D. CHC helicopter corp., F.D. Deutsche Telekom, F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D. Agrium inc., F.D. Deutsche Bank, F.D.Royal Bank of Canada, F.D. Saputo Inc., TARGET gdp growth, TARGET output gap, Geographic region effect

ANOVA (absolute numbers)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	202,810	9	22,534	13,811	,000(a)
	Residual	318,160	195	1,632		
	Total	520,970	204			
2	Regression	221,276	10	22,128	14,324	,000(b)
	Residual	299,694	194	1,545		
	Total	520,970	204			
3	Regression	231,153	11	21,014	13,994	,000(c)
	Residual	289,817	193	1,502		
	Total	520,970	204			
4	Regression	238,984	12	19,915	13,560	,000(d)
	Residual	281,986	192	1,469		
	Total	520,970	204			

a Predictors: (Constant), dummy home-abroad layoff, F.D. CHC helicopter corp., F.D. Deutsche Telekom, F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D. Agrium inc., F.D. Deutsche Bank, F.D.Royal Bank of Canada, F.D. Saputo Inc.
b Predictors: (Constant), dummy home-abroad layoff, F.D. CHC helicopter corp., F.D. Deutsche Telekom, F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D. Agrium inc., F.D. Deutsche Bank, F.D.Royal Bank of Canada, F.D. Saputo Inc., TARGET gdp growth
c Predictors: (Constant), dummy home-abroad layoff, F.D. CHC helicopter corp., F.D. Deutsche Telekom, F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D. Agrium inc., F.D. Deutsche Bank, F.D.Royal Bank of Canada, F.D. Saputo Inc., TARGET gdp growth, TARGET output gap
d Predictors: (Constant), dummy home-abroad layoff, F.D. CHC helicopter corp., F.D. Deutsche Telekom, F.D. DaimlerChrysler AG , F.D. Pixelpark AG, F.D. Agrium inc., F.D. Deutsche Bank, F.D.Royal Bank of Canada, F.D. Saputo Inc., TARGET gdp growth, TARGET output gap, Geographic region effect
e Dependent Variable: logAmount

Coefficients (absolute numbers)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	6,158	,159		38,683	,000		
F.D. Agrium inc.	-1,942	,419	-,262	-4,640	,000	,979	1,021
F.D. CHC helicopter corp.	-2,130	,746	-,160	-2,857	,005	,993	1,008
F.D.Royal Bank of Canada	-1,872	,426	-,253	-4,392	,000	,944	1,059
F.D. Saputo Inc.	-1,115	,380	-,170	-2,937	,004	,930	1,075
F.D. DaimlerChrysler AG	3,632	,910	,224	3,991	,000	,995	1,005

	F.D. Deutsche Bank	,899	,323	,160	2,788	,006	,955	1,047
	F.D. Deutsche Telekom	1,734	,465	,211	3,731	,000	,983	1,018
	F.D. Pixelpark AG	-2,033	,583	-,197	-3,487	,001	,984	1,017
	dummy home-abroad layoff	-,450	,196	-,134	-2,291	,023	,917	1,090
2	(Constant)	6,564	,194		33,793	,000		
	F.D. Agrium inc.	-1,778	,410	-,240	-4,336	,000	,966	1,035
	F.D. CHC helicopter corp.	-2,255	,727	-,170	-3,103	,002	,990	1,010
	F.D.Royal Bank of Canada	-1,787	,416	-,241	-4,301	,000	,941	1,063
	F.D. Saputo Inc.	-1,036	,370	-,158	-2,801	,006	,927	1,079
	F.D. DaimlerChrysler AG	3,414	,888	,210	3,846	,000	,990	1,010
	F.D. Deutsche Bank	,932	,314	,166	2,969	,003	,954	1,048
	F.D. Deutsche Telekom	1,798	,453	,218	3,972	,000	,981	1,019
	F.D. Pixelpark AG	-2,129	,568	-,206	-3,748	,000	,981	1,019
	dummy home-abroad layoff	-,407	,192	-,121	-2,127	,035	,914	1,094
	TARGET gdp growth	-19,674	5,690	-,192	-3,457	,001	,961	1,040
3	(Constant)	6,602	,192		34,371	,000		
	F.D. Agrium inc.	-1,762	,404	-,238	-4,358	,000	,966	1,035
	F.D. CHC helicopter corp.	-2,033	,721	-,153	-2,818	,005	,976	1,025
	F.D.Royal Bank of Canada	-1,562	,419	-,211	-3,729	,000	,900	1,112
	F.D. Saputo Inc.	-1,181	,369	-,180	-3,198	,002	,905	1,105
	F.D. DaimlerChrysler AG	3,260	,877	,201	3,716	,000	,985	1,015
	F.D. Deutsche Bank	,989	,310	,176	3,186	,002	,950	1,053
	F.D. Deutsche Telekom	1,961	,451	,238	4,350	,000	,961	1,040
	F.D. Pixelpark AG	-2,294	,564	-,222	-4,069	,000	,968	1,033
	dummy home-abroad layoff	-,387	,189	-,115	-2,047	,042	,912	1,096
	TARGET gdp growth	-22,962	5,755	-,224	-3,990	,000	,914	1,094
	TARGET output gap	21,154	8,248	,150	2,565	,011	,844	1,184
4	(Constant)	6,360	,217		29,320	,000		
	F.D. Agrium inc.	-1,570	,408	-,212	-3,845	,000	,926	1,080
	F.D. CHC helicopter corp.	-1,739	,725	-,131	-2,399	,017	,946	1,057
	F.D.Royal Bank of Canada	-1,283	,432	-,173	-2,974	,003	,829	1,206
	F.D. Saputo Inc.	-,985	,375	-,151	-2,629	,009	,859	1,164
	F.D. DaimlerChrysler AG	2,948	,878	,182	3,358	,001	,962	1,040
	F.D. Deutsche Bank	,699	,332	,124	2,107	,036	,813	1,230
	F.D. Deutsche Telekom	1,680	,462	,204	3,636	,000	,895	1,117
	F.D. Pixelpark AG	-2,611	,574	-,253	-4,547	,000	,913	1,095
	dummy home-abroad layoff	-,452	,189	-,135	-2,393	,018	,891	1,122
	TARGET gdp growth	-20,252	5,811	-,198	-3,485	,001	,876	1,141
	TARGET output gap	26,017	8,425	,184	3,088	,002	,792	1,263
	Geographic region effect	,525	,228	,163	2,309	,022	,563	1,775

a Dependent Variable: LogAbsolute Value

Appendix 5.5.2 LAYOFF SIZE RELATIVE TO TOTAL EMPLOYEES

Model summary (Total share)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,628(a)	,394	,376	1,19843
2	,645(b)	,416	,395	1,17995
3	,655(c)	,430	,406	1,16869

a Predictors: (Constant), dummy home-abroad layoff, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Siemens, F.D.Royal Bank of Canada, F.D.CAE Inc.
b Predictors: (Constant), dummy home-abroad layoff, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Siemens, F.D.Royal Bank of Canada, F.D.CAE Inc., TARGET gdp growth
c Predictors: (Constant), dummy home-abroad layoff, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Siemens, F.D.Royal Bank of Canada, F.D.CAE Inc., TARGET gdp growth, TARGET output gap

ANOVA (Total share)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	184,958	6	30,826	21,463	,000(a)
	Residual	284,376	198	1,436		
	Total	469,334	204			
2	Regression	195,054	7	27,865	20,014	,000(b)
	Residual	274,280	197	1,392		
	Total	469,334	204			
3	Regression	201,630	8	25,204	18,453	,000(c)
	Residual	267,704	196	1,366		
	Total	469,334	204			

a Predictors: (Constant), dummy home-abroad layoff, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Siemens, F.D.Royal Bank of Canada, F.D.CAE Inc.
b Predictors: (Constant), dummy home-abroad layoff, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Siemens, F.D.Royal Bank of Canada, F.D.CAE Inc., TARGET gdp growth
c Predictors: (Constant), dummy home-abroad layoff, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Siemens, F.D.Royal Bank of Canada, F.D.CAE Inc., TARGET gdp growth, TARGET output gap
d Dependent Variable: logTotal

Coefficients (Total share)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-4,452	,153		-29,058	,000		
	F.D.CAE Inc.	,665	,451	,085	1,476	,142	,920	1,087
	F.D.Royal Bank of Canada	-2,141	,396	-,305	-5,404	,000	,962	1,040
	F.D. Sun Life Financial Inc.	2,247	,855	,146	2,627	,009	,991	1,009
	F.D. Pixelpark AG	1,778	,545	,181	3,262	,001	,991	1,009
	F.D. Siemens	-2,218	,300	-,415	-7,396	,000	,972	1,028
	dummy home-abroad layoff	-,544	,188	-,170	-2,890	,004	,879	1,137
2	(Constant)	-4,142	,190		-21,852	,000		
	F.D.CAE Inc.	,714	,444	,091	1,609	,109	,919	1,088
	F.D.Royal Bank of Canada	-2,112	,390	-,301	-5,410	,000	,961	1,041
	F.D. Sun Life Financial Inc.	2,203	,842	,143	2,615	,010	,991	1,009

	F.D. Pixelpark AG	1,678	,538	,171	3,120	,002	,987	1,014
	F.D. Siemens	-2,369	,301	-,443	-7,882	,000	,939	1,065
	dummy home-abroad layoff	-,487	,187	-,153	-2,610	,010	,868	1,152
	TARGET gdp growth	-14,629	5,433	-,150	-2,693	,008	,951	1,052
3	(Constant)	-4,125	,188		-21,949	,000		
	F.D.CAE Inc.	,834	,443	,107	1,882	,061	,905	1,105
	F.D.Royal Bank of Canada	-1,920	,396	-,273	-4,845	,000	,914	1,094
	F.D. Sun Life Financial Inc.	2,256	,835	,147	2,703	,007	,990	1,010
	F.D. Pixelpark AG	1,559	,535	,159	2,911	,004	,976	1,024
	F.D. Siemens	-2,272	,301	-,425	-7,549	,000	,918	1,089
	dummy home-abroad layoff	-,475	,185	-,149	-2,569	,011	,867	1,153
	TARGET gdp growth	-17,026	5,490	-,175	-3,101	,002	,913	1,095
	TARGET output gap	16,966	7,732	,127	2,194	,029	,874	1,144

a Dependent Variable: logTotal

Appendix 5.5.3 LAYOFF SIZE RELATIVE TO LOCAL EMPLOYEES

Model summary (Local share)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,523(a)	,274	,248	1,20673
2	,541(b)	,293	,264	1,19368
3	,555(c)	,308	,276	1,18438

a Predictors: (Constant), dummy home-abroad layoff, F.D. Celstica Inc., F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Siemens, F.D. Saputo Inc.
b Predictors: (Constant), dummy home-abroad layoff, F.D. Celstica Inc., F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Siemens, F.D. Saputo Inc., TARGET gdp growth
c Predictors: (Constant), dummy home-abroad layoff, F.D. Celstica Inc., F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Siemens, F.D. Saputo Inc., TARGET gdp growth, Geographic region effect

ANOVA (Local share)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	108,235	7	15,462	10,618	,000(a)
	Residual	286,873	197	1,456		
	Total	395,108	204			
2	Regression	115,834	8	14,479	10,162	,000(b)
	Residual	279,274	196	1,425		
	Total	395,108	204			
3	Regression	121,571	9	13,508	9,630	,000(c)
	Residual	273,537	195	1,403		
	Total	395,108	204			

a Predictors: (Constant), dummy home-abroad layoff, F.D. Celstica Inc., F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Siemens, F.D. Saputo Inc.
b Predictors: (Constant), dummy home-abroad layoff, F.D. Celstica Inc., F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Siemens, F.D. Saputo Inc., TARGET gdp growth
c Predictors: (Constant), dummy home-abroad layoff, F.D. Celstica Inc., F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Siemens, F.D. Saputo Inc., TARGET gdp growth, Geographic region effect
d Dependent Variable: logLocal

Coefficients (Local share)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-3,324	,152		-21,887	,000		
	F.D. Celstica Inc.	1,547	,467	,202	3,308	,001	,986	1,015
	F.D. Quebecor inc.	-,844	,311	-,168	-2,715	,007	,967	1,034
	F.D. Saputo Inc.	-1,066	,357	-,187	-2,988	,003	,940	1,064
	F.D. Sun Life Financial Inc.	2,085	,862	,148	2,418	,017	,989	1,011
	F.D. Pixelpark AG	2,178	,550	,242	3,960	,000	,987	1,014
	F.D. Siemens	-,888	,304	-,181	-2,916	,004	,957	1,045
	dummy home-abroad layoff	,681	,184	,233	3,692	,000	,929	1,077
2	(Constant)	-3,589	,189		-18,994	,000		
	F.D. Celstica Inc.	1,389	,467	,182	2,971	,003	,964	1,037
	F.D. Quebecor inc.	-,895	,308	-,178	-2,905	,004	,962	1,039
	F.D. Saputo Inc.	-1,100	,353	-,193	-3,114	,002	,938	1,066
	F.D. Sun Life Financial Inc.	2,111	,853	,149	2,475	,014	,989	1,011
	F.D. Pixelpark AG	2,255	,545	,251	4,136	,000	,983	1,017
	F.D. Siemens	-,767	,306	-,156	-2,508	,013	,929	1,077
	dummy home-abroad layoff	,636	,183	,217	3,466	,001	,918	1,089
	TARGET gdp growth	12,843	5,561	,144	2,309	,022	,928	1,077
3	(Constant)	-3,797	,214		-17,749	,000		
	F.D. Celstica Inc.	1,558	,471	,204	3,306	,001	,934	1,071
	F.D. Quebecor inc.	-,717	,318	-,143	-2,255	,025	,889	1,125
	F.D. Saputo Inc.	-,907	,363	-,159	-2,499	,013	,874	1,144
	F.D. Sun Life Financial Inc.	2,311	,852	,164	2,712	,007	,976	1,025
	F.D. Pixelpark AG	2,049	,550	,228	3,724	,000	,950	1,053
	F.D. Siemens	-,965	,319	-,197	-3,028	,003	,841	1,190
	dummy home-abroad layoff	,607	,183	,207	3,326	,001	,913	1,096
	TARGET gdp growth	14,520	5,580	,163	2,602	,010	,908	1,101
	Geographic region effect	,407	,201	,145	2,022	,045	,688	1,455

a Dependent Variable: logLocal

Appendix 5.6 SPSS outputs hypothesis 2

This appendix contains more comprehensive SPSS outputs regarding hypothesis two. Each section presents one of the two dimensions of layoff size assessed as dependent variables (layoff relative to total employees and layoff relative to local employees). Only two dimensions of size are here assessed since the *firm geographic dispersion* variable controls only for subsidiary distribution and not for employment distribution as would be required by hypothesis two. Consequently, only the two measures of size incorporating company employment levels are investigated.

Appendix 5.6.1 DEPENDENT VARIABLE: LAYOFF SIZE RELATIVE TO TOTAL EMPLOYEES

Model summary (Total share)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,618(a)	,382	,363	1,21039
2	,636(b)	,404	,383	1,19142

a Predictors: (Constant), Geographic Distance, F.D. Pixelpark AG, F.D. Siemens, F.D. Sun Life Financial Inc., F.D.CAE Inc., F.D.Royal Bank of Canada
b Predictors: (Constant), Geographic Distance, F.D. Pixelpark AG, F.D. Siemens, F.D. Sun Life Financial Inc., F.D.CAE Inc., F.D.Royal Bank of Canada, TARGET gdp growth

ANOVA (Total share)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	179,257	6	29,876	20,393	,000(a)
	Residual	290,077	198	1,465		
	Total	469,334	204			
2	Regression	189,696	7	27,099	19,091	,000(b)
	Residual	279,637	197	1,419		
	Total	469,334	204			

a Predictors: (Constant), Geographic Distance, F.D. Pixelpark AG, F.D. Siemens, F.D. Sun Life Financial Inc., F.D.CAE Inc., F.D.Royal Bank of Canada
b Predictors: (Constant), Geographic Distance, F.D. Pixelpark AG, F.D. Siemens, F.D. Sun Life Financial Inc., F.D.CAE Inc., F.D.Royal Bank of Canada, TARGET gdp growth
c Dependent Variable: logTotal

Coefficients (Total share)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-4,666	,115		-40,473	,000		
	F.D.CAE Inc.	,896	,442	,115	2,026	,044	,975	1,026
	F.D.Royal Bank of Canada	-2,191	,401	-,312	-5,469	,000	,960	1,042
	F.D. Sun Life Financial Inc.	2,235	,866	,145	2,582	,011	,987	1,013
	F.D. Pixelpark AG	1,669	,550	,170	3,035	,003	,994	1,006
	F.D. Siemens	-2,341	,301	-,438	-7,783	,000	,986	1,015
	Geographic Distance	-5,58 E-5	,000	-,119	-2,073	,040	,940	1,064
2	(Constant)	-4,337	,166		-26,141	,000		
	F.D.CAE Inc.	,930	,435	,119	2,136	,034	,974	1,026
	F.D.Royal Bank of Canada	-2,166	,394	-,308	-5,492	,000	,959	1,042
	F.D. Sun Life Financial Inc.	2,178	,852	,141	2,555	,011	,986	1,014
	F.D. Pixelpark AG	1,580	,542	,161	2,916	,004	,990	1,010
	F.D. Siemens	-2,481	,301	-,464	-8,253	,000	,957	1,045
	Geographic Distance	-4,56 E-5	,000	-,098	-1,705	,090	,922	1,085
	TARGET gdp growth	-14,926	5,504	-,153	-2,712	,007	,944	1,059

a Dependent Variable: logTotal

Appendix 5.6.2 DEPENDENT VARIABLE: LAYOFF SIZE RELATIVE TO LOCAL EMPLOYEES

Model summary (Local share)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,527(a)	,277	,252	1,20380
2	,542(b)	,294	,265	1,19323
3	,561(c)	,315	,283	1,17832

a Predictors: (Constant), Geographic distance, F.D. Pixelpark AG, F.D. Siemens, F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Saputo Inc.
b Predictors: (Constant), Geographic distance, F.D. Pixelpark AG, F.D. Siemens, F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Saputo Inc., EU region of provenince
c Predictors: (Constant), Geographic distance, F.D. Pixelpark AG, F.D. Siemens, F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Saputo Inc., Geographic region effect, TARGET gdp growth

ANOVA (Local share)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	109,626	7	15,661	10,807	,000(a)
	Residual	285,482	197	1,449		
	Total	395,108	204			
2	Regression	116,044	8	14,505	10,188	,000(b)
	Residual	279,064	196	1,424		
	Total	395,108	204			
3	Regression	124,362	9	13,818	9,952	,000(c)
	Residual	270,746	195	1,388		
	Total	395,108	204			

a Predictors: (Constant), Geographic distance, F.D. Pixelpark AG, F.D. Siemens, F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Saputo Inc.
b Predictors: (Constant), Geographic distance, F.D. Pixelpark AG, F.D. Siemens, F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Saputo Inc., EU region of provenince
c Predictors: (Constant), Geographic distance, F.D. Pixelpark AG, F.D. Siemens, F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. Quebecor inc., F.D. Saputo Inc., Geographic region effect, TARGET gdp growth
d Dependent Variable: logLocal

Coefficients (Local share)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-3,184	,124		-25,613	,000		
	F.D. Celstica Inc.	1,532	,466	,200	3,284	,001	,985	1,015
	F.D. Quebecor inc.	-,822	,310	-,163	-2,649	,009	,965	1,037
	F.D. Saputo Inc.	-,549	,355	-,096	-1,548	,123	,944	1,059
	F.D. Sun Life Financial Inc.	2,042	,861	,145	2,372	,019	,987	1,013
	F.D. Pixelpark AG	2,378	,548	,264	4,339	,000	,989	1,011
	F.D. Siemens	-,673	,302	-,137	-2,231	,027	,970	1,030
	Geographic distance	,000	,000	,239	3,829	,000	,944	1,060
2	(Constant)	-3,391	,157		-21,596	,000		
	F.D. Celstica Inc.	1,726	,471	,226	3,662	,000	,948	1,055
	F.D. Quebecor inc.	-,622	,322	-,123	-1,931	,055	,881	1,135
	F.D. Saputo Inc.	-,344	,365	-,060	-,942	,347	,878	1,139
	F.D. Sun Life Financial Inc.	2,227	,858	,158	2,597	,010	,977	1,023

	F.D. Pixelpark AG	2,151	,554	,239	3,886	,000	,952	1,050
	F.D. Siemens	-,900	,317	-,183	-2,834	,005	,860	1,162
	Geographic distance	,000	,000	,247	3,993	,000	,940	1,064
	EU region of provenince	,426	,201	,152	2,123	,035	,703	1,423
3	(Constant)	-3,705	,201		-18,408	,000		
	F.D. Celstica Inc.	1,591	,469	,208	3,395	,001	,935	1,070
	F.D. Quebecor inc.	-,651	,318	-,129	-2,047	,042	,880	1,136
	F.D. Saputo Inc.	-,392	,361	-,069	-1,087	,279	,875	1,143
	F.D. Sun Life Financial Inc.	2,296	,847	,163	2,709	,007	,976	1,025
	F.D. Pixelpark AG	2,182	,547	,242	3,990	,000	,952	1,051
	F.D. Siemens	-,823	,315	-,168	-2,611	,010	,852	1,174
	Geographic distance	$9{,}63\ E^{-5}$	,000	,225	3,632	,000	,919	1,088
	Geographic region effect	,491	,200	,175	2,456	,015	,690	1,449
	TARGET gdp growth	13,649	5,576	,153	2,448	,015	,900	1,111

a Dependent Variable: logLocal

Appendix 5.7 SPSS outputs hypothesis 3

This appendix contains more comprehensive SPSS outputs regarding hypothesis three. The base analysis for hypothesis three seeks to investigate the repercussions that the total amount of people laid off and the total number of times corporations recurred to downsizing within the ten year investigation have on companies' long term performance. In order to comply with the task, performances are assessed averaging the firms' performance for the last three years of the sample observed.

Appendix 5.7.1 INDEPENDENT VARIABLE: TOTAL NUMBER OF PEOPLE LAID OFF ABROAD

ROE (last 3)

Model Summary (ROE last 3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,941(a)	,886	,881	,065083295
2	,944(b)	,891	,885	,063934058

a Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Pixelpark AG, F.D. Nova Chemicals Corp., F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc.
b Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Pixelpark AG, F.D. Nova Chemicals Corp., F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., Geographic region effect

ANOVA (ROE last 3)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5,715	8	,714	168,639	,000(a)
	Residual	,733	173	,004		
	Total	6,447	181			
2	Regression	5,744	9	,638	156,147	,000(b)
	Residual	,703	172	,004		
	Total	6,447	181			

a Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Pixelpark AG, F.D. Nova Chemicals Corp., F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc.
b Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Pixelpark AG, F.D. Nova Chemicals Corp., F.D. Celstica Inc., F.D. Sun Life Financial Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., Geographic region effect
c Dependent Variable: ROE LAST 3

Coefficients (ROE last 3)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	,104	,010		10,765	,000		
F.D. ATS Automation Tooling Systems Inc	-,253	,047	-,140	-5,382	,000	,968	1,033
F.D. Celstica Inc.	-,326	,027	-,309	-11,881	,000	,970	1,031
F.D. Nortel networks corp.	,416	,016	,659	25,433	,000	,977	1,023
F.D. Nova Chemicals Corp.	-,454	,046	-,252	-9,777	,000	,992	1,008
F.D. Quebecor inc.	-,291	,019	-,412	-15,230	,000	,899	1,113
F.D. Sun Life Financial Inc.	,296	,047	,164	6,294	,000	,968	1,033
F.D. Pixelpark AG	-,167	,030	-,145	-5,635	,000	,990	1,010
ABROAD / TOT layoff	,030	,018	,047	1,689	,093	,849	1,177
2 (Constant)	,129	,013		9,764	,000		
F.D. ATS Automation Tooling Systems Inc	-,278	,047	-,154	-5,898	,000	,932	1,073
F.D. Celstica Inc.	-,342	,028	-,324	-12,392	,000	,926	1,080
F.D. Nortel networks corp.	,397	,017	,630	22,736	,000	,826	1,211
F.D. Nova Chemicals Corp.	-,475	,046	-,263	-10,264	,000	,964	1,037

F.D. Quebecor inc.	-,305	,020	-,433	-15,641	,000	,829	1,206
F.D. Sun Life Financial Inc.	,271	,047	,150	5,761	,000	,932	1,073
F.D. Pixelpark AG	-,154	,030	-,133	-5,198	,000	,962	1,039
ABROAD / TOT layoff	,017	,018	,026	,919	,360	,786	1,272
Geographic region effect	-,032	,012	-,084	-2,697	,008	,656	1,523

a Dependent Variable: ROE LAST 3

ROA (last 3)

Model Summary (ROA last 3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,870(a)	,756	,748	,054280860
2	,875(b)	,765	,756	,053432750
3	,878(c)	,771	,761	,052888965

a Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Agrium inc., F.D. Sun Life Financial Inc., F.D. Schering, F.D. Saputo Inc.
b Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Agrium inc., F.D. Sun Life Financial Inc., F.D. Schering, F.D. Saputo Inc., Geographic region effect
c Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Agrium inc., F.D. Sun Life Financial Inc., F.D. Schering, F.D. Saputo Inc., Geographic region effect, TARGET output gap

ANOVA (ROA last 3)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1,601	6	,267	90,536	,000(a)
	Residual	,516	175	,003		
	Total	2,116	181			
2	Regression	1,619	7	,231	81,028	,000(b)
	Residual	,497	174	,003		
	Total	2,116	181			
3	Regression	1,632	8	,204	72,940	,000(c)
	Residual	,484	173	,003		
	Total	2,116	181			

a Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Agrium inc., F.D. Sun Life Financial Inc., F.D. Schering, F.D. Saputo Inc.
b Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Agrium inc., F.D. Sun Life Financial Inc., F.D. Schering, F.D. Saputo Inc., Geographic region effect
c Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Agrium inc., F.D. Sun Life Financial Inc., F.D. Schering, F.D. Saputo Inc., Geographic region effect, TARGET output gap
d Dependent Variable: ROA LAST 3

Coefficients (ROA last 3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,020	,008		2,417	,017		
	F.D. Agrium inc.	,060	,019	,120	3,202	,002	,984	1,016
	F.D. Nortel networks corp.	-,250	,014	-,691	-18,361	,000	,984	1,017
	F.D. Saputo Inc.	,080	,019	,161	4,222	,000	,963	1,039
	F.D. Sun Life Financial Inc.	,398	,039	,384	10,118	,000	,965	1,036
	F.D. Schering	,187	,039	,181	4,758	,000	,965	1,036
	ABROAD / TOT layoff	-,017	,014	-,046	-1,174	,242	,915	1,093
2	(Constant)	-,002	,012		-,165	,869		
	F.D. Agrium inc.	,076	,019	,153	3,906	,000	,882	1,133
	F.D. Nortel networks corp.	-,234	,015	-,649	-16,027	,000	,823	1,215
	F.D. Saputo Inc.	,098	,020	,197	4,919	,000	,843	1,186
	F.D. Sun Life Financial Inc.	,420	,040	,406	10,591	,000	,919	1,088
	F.D. Schering	,184	,039	,178	4,751	,000	,964	1,037
	ABROAD / TOT layoff	-,001	,015	-,004	-,087	,931	,774	1,293

	Geographic region effect	,025	,010	,117	2,569	,011	,648	1,544
3	(Constant)	-,003	,012		-,236	,813		
	F.D. Agrium inc.	,077	,019	,154	3,977	,000	,882	1,133
	F.D. Nortel networks corp.	-,230	,015	-,637	-15,768	,000	,809	1,236
	F.D. Saputo Inc.	,103	,020	,207	5,193	,000	,831	1,203
	F.D. Sun Life Financial Inc.	,419	,039	,405	10,684	,000	,919	1,089
	F.D. Schering	,183	,038	,177	4,774	,000	,964	1,038
	ABROAD / TOT layoff	-,002	,015	-,004	-,101	,920	,774	1,293
	Geographic region effect	,023	,010	,108	2,387	,018	,642	1,557
	TARGET output gap	-,845	,394	-,081	-2,144	,033	,937	1,067

a Dependent Variable: ROA LAST 3

Tobin's Q 1 (last 3)

Model Summary (Tobin's Q 1 last 3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,954(a)	,909	,906	,280476925

a Predictors: (Constant), ABROAD / TOT layoff, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D. Deutsche Bank, F.D. Quebecor inc., F.D.Royal Bank of Canada

ANOVA (Tobin's Q 1 last 3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	137,900	6	22,983	292,158	,000(a)
	Residual	13,767	175	,079		
	Total	151,666	181			

a Predictors: (Constant), ABROAD / TOT layoff, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D. Deutsche Bank, F.D. Quebecor inc., F.D.Royal Bank of Canada
b Dependent Variable: 1)TOBIN'S Q last 3

Coefficients (Tobin's Q 1 last 3)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1,683	,042		39,750	,000		
F.D. ATS Automation Tooling Systems Inc	7,515	,203	,858	37,060	,000	,967	1,034
F.D. Quebecor inc.	-,371	,085	-,108	-4,365	,000	,844	1,185
F.D.Royal Bank of Canada	-,460	,111	-,109	-4,149	,000	,747	1,339
F.D. Deutsche Bank	-,448	,073	-,146	-6,113	,000	,905	1,105
F.D. Schering	1,723	,203	,197	8,494	,000	,967	1,034
ABROAD / TOT layoff	-,356	,090	-,114	-3,971	,000	,630	1,586

a Dependent Variable: 1)TOBIN'S Q last 3

Tobin's Q 2 (last 3)

Model Summary (Tobin's Q 2 last 3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,948(a)	,900	,895	,320218808

a Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Saputo Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D.CAE Inc., F.D.Royal Bank of Canada

ANOVA (Tobin's Q 2 last 3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	159,745	7	22,821	222,553	,000(a)
	Residual	17,842	174	,103		
	Total	177,587	181			

a Predictors: (Constant), ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Saputo Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D.CAE Inc., F.D.Royal Bank of Canada
b Dependent Variable: 2)TOBIN'S Q last 3

Coefficients (Tobin's Q 2 last 3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,826	,053		15,617	,000		
	F.D. ATS Automation Tooling Systems Inc	8,038	,233	,848	34,570	,000	,959	1,043
	F.D.CAE Inc.	,710	,122	,147	5,794	,000	,893	1,119
	F.D. Nortel networks corp.	-,197	,081	-,060	-2,430	,016	,963	1,039
	F.D.Royal Bank of Canada	-,421	,124	-,092	-3,404	,001	,785	1,273
	F.D. Saputo Inc.	1,154	,112	,253	10,300	,000	,956	1,046
	F.D. Deutsche Bank	-,614	,083	-,185	-7,411	,000	,922	1,084
	ABROAD / TOT layoff	-,193	,099	-,057	-1,960	,052	,678	1,475

a Dependent Variable: 2)TOBIN'S Q last 3

Appendix 5.7.2 INDEPENDENT VARIABLE: TOTAL NUMBER OF LAYOFFS ABROAD

ROE (last 3)

Model Summary (ROE last 3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,944(a)	,891	,886	,063674979
2	,949(b)	,901	,896	,060924474

a Predictors: (Constant), frq ABROAD/TOT, F.D. Nova Chemicals Corp., F.D. Celstica Inc., F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc.
b Predictors: (Constant), frq ABROAD/TOT, F.D. Nova Chemicals Corp., F.D. Celstica Inc., F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., Geographic region effect

ANOVA (ROE last 3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,746	8	,718	177,148	,000(a)
	Residual	,701	173	,004		
	Total	6,447	181			
2	Regression	5,809	9	,645	173,890	,000(b)
	Residual	,638	172	,004		
	Total	6,447	181			

a Predictors: (Constant), frq ABROAD/TOT, F.D. Nova Chemicals Corp., F.D. Celstica Inc., F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc.
b Predictors: (Constant), frq ABROAD/TOT, F.D. Nova Chemicals Corp., F.D. Celstica Inc., F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., Geographic region effect
c Dependent Variable: ROE LAST 3

Coefficients (ROE last 3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,068	,016		4,181	,000		
	F.D. ATS Automation Tooling Systems Inc	-,217	,048	-,120	-4,527	,000	,895	1,117
	F.D. Celstica Inc.	-,322	,027	-,305	-12,098	,000	,989	1,011
	F.D. Nortel networks corp.	,427	,016	,678	26,157	,000	,937	1,067
	F.D. Nova Chemicals Corp.	-,448	,045	-,248	-9,855	,000	,991	1,009
	F.D. Quebecor inc.	-,260	,019	-,367	-13,585	,000	,859	1,164
	F.D. Sun Life Financial Inc.	,255	,046	,141	5,515	,000	,962	1,040
	F.D. Pixelpark AG	-,178	,029	-,155	-6,093	,000	,974	1,027
	frq ABROAD/TOT	,078	,024	,095	3,273	,001	,742	1,348
2	(Constant)	,080	,016		5,095	,000		
	F.D. ATS Automation Tooling Systems Inc	-,229	,046	-,127	-4,999	,000	,891	1,122
	F.D. Celstica Inc.	-,349	,026	-,331	-13,277	,000	,924	1,082
	F.D. Nortel networks corp.	,403	,017	,640	24,185	,000	,823	1,215
	F.D. Nova Chemicals Corp.	-,472	,044	-,262	-10,755	,000	,973	1,027
	F.D. Quebecor inc.	-,280	,019	-,397	-14,782	,000	,799	1,252
	F.D. Sun Life Financial Inc.	,219	,045	,122	4,879	,000	,927	1,079
	F.D. Pixelpark AG	-,163	,028	-,142	-5,788	,000	,958	1,044
	frq ABROAD/TOT	,100	,023	,123	4,283	,000	,702	1,425
	Geographic region effect	-,046	,011	-,121	-4,120	,000	,671	1,490

a Dependent Variable: ROE LAST 3

ROA (last 3)

Model Summary (ROA last 3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,872(a)	,761	,753	,053784495
2	,877(b)	,768	,759	,053084836

a Predictors: (Constant), frq ABROAD/TOT, F.D. Agrium inc., F.D. Nortel networks corp., F.D. Schering, F.D. Sun Life Financial Inc., F.D. Saputo Inc.
b Predictors: (Constant), frq ABROAD/TOT, F.D. Agrium inc., F.D. Nortel networks corp., F.D. Schering, F.D. Sun Life Financial Inc., F.D. Saputo Inc., Geographic region effect

ANOVA (ROA last 3)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1,610	6	,268	92,756	,000(a)
	Residual	,506	175	,003		
	Total	2,116	181			
2	Regression	1,626	7	,232	82,421	,000(b)
	Residual	,490	174	,003		
	Total	2,116	181			

a Predictors: (Constant), frq ABROAD/TOT, F.D. Agrium inc., F.D. Nortel networks corp., F.D. Schering, F.D. Sun Life Financial Inc., F.D. Saputo Inc.
b Predictors: (Constant), frq ABROAD/TOT, F.D. Agrium inc., F.D. Nortel networks corp., F.D. Schering, F.D. Sun Life Financial Inc., F.D. Saputo Inc., Geographic region effect
c Dependent Variable: ROA LAST 3

Coefficients (ROA last 3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,015	,013		-1,129	,261		
	F.D. Agrium inc.	,065	,019	,130	3,492	,001	,982	1,018
	F.D. Nortel networks corp.	-,243	,014	-,673	-17,735	,000	,948	1,055
	F.D. Saputo Inc.	,101	,020	,203	5,002	,000	,828	1,207
	F.D. Sun Life Financial Inc.	,390	,039	,377	10,010	,000	,963	1,039
	F.D. Schering	,180	,039	,174	4,607	,000	,963	1,039
	frq ABROAD/TOT	,043	,020	,091	2,156	,032	,764	1,309

2	(Constant)	-,020	,013		-1,512	,132		
	F.D. Agrium inc.	,077	,019	,154	4,038	,000	,915	1,093
	F.D. Nortel networks corp.	-,232	,014	-,642	-16,195	,000	,846	1,182
	F.D. Saputo Inc.	,109	,020	,219	5,386	,000	,806	1,240
	F.D. Sun Life Financial Inc.	,407	,039	,394	10,406	,000	,930	1,076
	F.D. Schering	,175	,039	,169	4,533	,000	,960	1,042
	frq ABROAD/TOT	,031	,020	,065	1,515	,132	,715	1,398
	Geographic region effect	,022	,009	,102	2,376	,019	,717	1,394

a Dependent Variable: ROA LAST 3

Tobin's Q 1 (last 3)

Model Summary (Tobin's Q 1 last 3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,952(a)	,906	,903	,285639863

a Predictors: (Constant), frq ABROAD/TOT, F.D. Schering, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., F.D.Royal Bank of Canada

ANOVA (Tobin's Q 1 last 3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	137,388	6	22,898	280,647	,000(a)
	Residual	14,278	175	,082		
	Total	151,666	181			

a Predictors: (Constant), frq ABROAD/TOT, F.D. Schering, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., F.D.Royal Bank of Canada
b Dependent Variable: 1)TOBIN'S Q last 3

Coefficients (Tobin's Q 1 last 3)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
Model	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1,752	,074		23,760	,000		
F.D. ATS Automation Tooling Systems Inc	7,446	,215	,850	34,630	,000	,892	1,121
F.D. Quebecor inc.	-,578	,085	-,169	-6,838	,000	,883	1,133
F.D.Royal Bank of Canada	-,529	,110	-,126	-4,809	,000	,787	1,271
F.D. Deutsche Bank	-,460	,075	-,150	-6,108	,000	,888	1,126
F.D. Schering	2,009	,209	,229	9,596	,000	,941	1,063
frq ABROAD/TOT	-,356	,119	-,090	-2,989	,003	,595	1,680

a Dependent Variable: 1)TOBIN'S Q last 3

Tobin's Q 2 (last 3)

Model Summary (Tobin's Q 2 last 3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,949(a)	,901	,897	,317795923

a Predictors: (Constant), frq ABROAD/TOT, F.D. Nortel networks corp., F.D.CAE Inc., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D.Royal Bank of Canada, F.D. Saputo Inc.

ANOVA (Tobin's Q 2 last 3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	160,014	7	22,859	226,340	,000(a)
	Residual	17,573	174	,101		
	Total	177,587	181			

a Predictors: (Constant), frq ABROAD/TOT
b Dependent Variable: 2)TOBIN'S Q last 3

Coefficients (Tobin's Q 2 last 3)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
Model	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	,515	,093		5,562	,000		
F.D. ATS Automation Tooling Systems Inc	8,349	,243	,881	34,355	,000	,865	1,157
F.D.CAE Inc.	,870	,121	,180	7,178	,000	,900	1,111
F.D. Nortel networks corp.	-,156	,082	-,047	-1,900	,059	,922	1,084
F.D.Royal Bank of Canada	-,667	,122	-,146	-5,441	,000	,787	1,271
F.D. Saputo Inc.	1,330	,123	,292	10,776	,000	,775	1,291
F.D. Deutsche Bank	-,705	,084	-,213	-8,438	,000	,893	1,120
frq ABROAD/TOT	,364	,142	,085	2,562	,011	,520	1,924

a Dependent Variable: 2)TOBIN'S Q last 3

Appendix 5.8 Additional analysis hypothesis 3

For hypothesis three it is interesting to see if the apparent negative relation found between long term performance and abroad layoffs holds true also for the shorter term. Two operationalizations of short term performance are proposed: the performance for the year following the layoff (short term) and the average performance of the following three years (mid term). In order to check for those, also the dependent variables (size and frequency of layoff) need to be tuned accordingly. In fact, the layoff observations are not only clustered by company, as it was done for the original analysis, but also by year. This way it is possible to know how many times in a year and how much workforce was laid off abroad by a company each year included in the sample. The results of the analysis are presented next.

Appendix 5.8.1 CORPORATE PERFORMANCE FOR THE YEAR FOLLOWING LAYOFFS [SHORT TERM]

Independent variable: relative number of people laid off abroad over total per year

In terms of number of people laid off and following year performance, only accounting measures support the theory of abroad layoffs improving company performance with positive and (marginally) significant betas: ROE sig.= 0,051; ROA sig.= 0,080.

Market measures of performance instead have both negative betas, but only the first operationalization of the Tobin's q is also significant (at 0,05 percent level).

ROE (t+1)

Model Summary (ROE t+1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,792(a)	,628	,622	,477707007
2	,800(b)	,639	,631	,471703742

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp.
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., HOME output gap

ANOVA (ROE t+1)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68,567	3	22,856	100,154	,000(a)
	Residual	40,620	178	,228		
	Total	109,187	181			
2	Regression	69,804	4	17,451	78,430	,000(b)
	Residual	39,383	177	,223		
	Total	109,187	181			

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp.
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., HOME output gap
c Dependent Variable: ROE t+1

Coefficients (ROE t+1)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,018	,060		-,293	,770		
	F.D. Nortel networks corp.	-1,129	,119	-,435	-9,494	,000	,996	1,004
	F.D. Pixelpark AG	-3,228	,217	-,681	-14,875	,000	,997	1,003
	x year ABROAD / TOT layoff	,152	,095	,073	1,600	,111	,999	1,001
2	(Constant)	-,030	,060		-,507	,613		
	F.D. Nortel networks corp.	-1,085	,119	-,418	-9,132	,000	,972	1,029
	F.D. Pixelpark AG	-3,091	,222	-,652	-13,928	,000	,929	1,076
	x year ABROAD / TOT layoff	,187	,095	,090	1,962	,051	,975	1,025
	HOME output gap	-9,420	3,995	-,112	-2,358	,019	,896	1,115

a Dependent Variable: ROE t+1

ROA (t+1)

Model Summary (ROA t+1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,895(a)	,802	,797	,127727679
2	,901(b)	,812	,807	,124620362

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc.
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., HOME output gap

ANOVA (ROA t+1)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11,678	4	2,919	178,946	,000(a)
	Residual	2,888	177	,016		
	Total	14,565	181			
2	Regression	11,832	5	2,366	152,372	,000(b)
	Residual	2,733	176	,016		
	Total	14,565	181			

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc.
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., HOME output gap
c Dependent Variable: ROA t+1

Coefficients (ROA t+1)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,000	,016		,030	,976		
	F.D. Nortel networks corp.	-,239	,032	-,253	-7,527	,000	,995	1,005
	F.D. Sun Life Financial Inc.	,359	,092	,132	3,912	,000	,978	1,023
	F.D. Pixelpark AG	-1,482	,058	-,857	-25,549	,000	,997	1,004
	x year ABROAD / TOT layoff	,033	,026	,043	1,281	,202	,978	1,022
2	(Constant)	-,004	,016		-,246	,806		
	F.D. Nortel networks corp.	-,224	,031	-,236	-7,127	,000	,970	1,031
	F.D. Sun Life Financial Inc.	,371	,090	,137	4,137	,000	,976	1,025
	F.D. Pixelpark AG	-1,434	,059	-,829	-24,447	,000	,928	1,077
	x year ABROAD / TOT layoff	,045	,025	,059	1,759	,080	,957	1,045
	HOME output gap	-3,330	1,056	-,109	-3,152	,002	,895	1,117

a Dependent Variable: ROA t+1

Tobin's Q 1 (t+1)

Model Summary (Tobin's Q 1 t+1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,820(a)	,672	,659	,468123638

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D.CAE Inc., F.D.Royal Bank of Canada

ANOVA (Tobin's Q 1 t+1)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78,213	7	11,173	50,987	,000(a)
	Residual	38,130	174	,219		
	Total	116,343	181			

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D.CAE Inc., F.D.Royal Bank of Canada
b Dependent Variable: 1) T'S Q t+1

Coefficients (Tobin's Q 1 t+1)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1,544	,065		23,917	,000		
F.D. ATS Automation Tooling Systems Inc	5,296	,337	,691	15,705	,000	,974	1,027
F.D.CAE Inc.	,684	,176	,175	3,898	,000	,930	1,075
F.D. Nortel networks corp.	,576	,118	,215	4,876	,000	,970	1,031
F.D.Royal Bank of Canada	-,468	,171	-,127	-2,747	,007	,881	1,135
F.D. Deutsche Bank	-,402	,118	-,150	-3,399	,001	,966	1,036
F.D. Schering	1,442	,338	,188	4,266	,000	,969	1,032
x year ABROAD / TOT layoff	-,218	,104	-,102	-2,105	,037	,809	1,236

a Dependent Variable: 1) Tobin' s Q t+1

Tobin's Q 2 (t+1)

Model Summary (Tobin's Q 2 t+1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,810(a)	,656	,642	,538824485
2	,818(b)	,669	,654	,530211666

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D.CAE Inc., F.D.Royal Bank of Canada
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D.CAE Inc., F.D.Royal Bank of Canada, Geographic region effect

ANOVA (Tobin's Q 2 t+1)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	96,375	7	13,768	47,421	,000(a)
	Residual	50,518	174	,290		
	Total	146,893	181			
2	Regression	98,258	8	12,282	43,690	,000(b)
	Residual	48,635	173	,281		
	Total	146,893	181			

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D.CAE Inc., F.D.Royal Bank of Canada
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Nortel networks corp., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D.CAE Inc., F.D.Royal Bank of Canada, Geographic region effect
c Dependent Variable: 2) T'S Q t+1

Coefficients (Tobin's Q 2 t+1)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,774	,078		9,957	,000		
	F.D. ATS Automation Tooling Systems Inc	5,790	,389	,672	14,889	,000	,971	1,030
	F.D.CAE Inc.	1,077	,203	,246	5,301	,000	,920	1,087
	F.D. Nortel networks corp.	,559	,136	,186	4,095	,000	,961	1,041
	F.D.Royal Bank of Canada	-,526	,196	-,127	-2,687	,008	,887	1,128
	F.D. Deutsche Bank	-,549	,136	-,183	-4,026	,000	,961	1,041
	F.D. Saputo Inc.	,870	,189	,210	4,604	,000	,950	1,052
	x year ABROAD / TOT layoff	-,087	,119	-,036	-,727	,468	,807	1,239
2	(Constant)	,950	,102		9,282	,000		
	F.D. ATS Automation Tooling Systems Inc	5,614	,389	,651	14,445	,000	,941	1,063
	F.D.CAE Inc.	,906	,211	,207	4,303	,000	,829	1,206
	F.D. Nortel networks corp.	,411	,146	,136	2,811	,006	,813	1,231
	F.D.Royal Bank of Canada	-,640	,198	-,155	-3,241	,001	,842	1,188
	F.D. Deutsche Bank	-,432	,142	-,144	-3,047	,003	,862	1,159
	F.D. Saputo Inc.	,709	,196	,171	3,613	,000	,854	1,171
	x year ABROAD / TOT layoff	-,148	,120	-,061	-1,236	,218	,776	1,289
	Geographic region effect	-,260	,100	-,144	-2,588	,010	,618	1,618

a Dependent Variable: 2) T'S Q t+1

Independent variable: relative number of layoffs abroad over total per year

If we assess short term performance in relation with the number of times companies dismissed employees abroad per year, hypothesis three is supported for all performance measures. In spite of that, only accounting measures are also statistically significant, with ROE significance at 0,05 percent and ROA significance at the 0,01 percent level.

ROE (t+1)

Model Summary (ROE t+1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,796(a)	,634	,628	,474031165
2	,802(b)	,642	,634	,469643708

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp.
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., HOME output gap

ANOVA (ROE t+1)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69,189	3	23,063	102,637	,000(a)
	Residual	39,998	178	,225		
	Total	109,187	181			
2	Regression	70,147	4	17,537	79,508	,000(b)
	Residual	39,040	177	,221		
	Total	109,187	181			

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp.
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., HOME output gap
c Dependent Variable: ROE t+1

Coefficients (ROE t+1)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,096	,076		-1,263	,208		
	F.D. Nortel networks corp.	-1,108	,118	-,427	-9,349	,000	,987	1,013
	F.D. Pixelpark AG	-3,277	,216	-,691	-15,150	,000	,988	1,012
	year frq ABROAD/TOT	,252	,109	,106	2,317	,022	,980	1,021
2	(Constant)	-,092	,076		-1,218	,225		
	F.D. Nortel networks corp.	-1,071	,119	-,413	-9,027	,000	,965	1,036
	F.D. Pixelpark AG	-3,158	,222	-,666	-14,244	,000	,923	1,084
	year frq ABROAD/TOT	,251	,108	,106	2,332	,021	,980	1,021
	HOME output gap	-8,190	3,931	-,098	-2,084	,039	,918	1,089

a Dependent Variable: ROE t+1

ROA (t+1)

Model Summary (ROA t+1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,898(a)	,806	,802	,126323030
2	,903(b)	,815	,810	,123717816

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc.
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., HOME output gap

ANOVA (ROA t+1)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11,741	4	2,935	183,937	,000(a)
	Residual	2,824	177	,016		
	Total	14,565	181			
2	Regression	11,871	5	2,374	155,119	,000(b)
	Residual	2,694	176	,015		
	Total	14,565	181			

a Predictors: (Constant), year frq ABROAD/TOT
b Predictors: (Constant), year frq ABROAD/TOT, HOME output gap
c Predictors: (Constant), year frq ABROAD/TOT, HOME output gap, Geographic region effect
d Dependent Variable: ROA t+1

Coefficients (ROA t+1)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,025	,020		-1,250	,213		
	F.D. Nortel networks corp.	-,233	,032	-,246	-7,388	,000	,986	1,014
	F.D. Sun Life Financial Inc.	,349	,091	,129	3,850	,000	,982	1,018
	F.D. Pixelpark AG	-1,496	,058	-,864	-25,942	,000	,987	1,013
	year frq ABROAD/TOT	,069	,029	,080	2,374	,019	,964	1,037
2	(Constant)	-,024	,020		-1,187	,237		
	F.D. Nortel networks corp.	-,220	,031	-,232	-7,025	,000	,964	1,037
	F.D. Sun Life Financial Inc.	,365	,089	,135	4,108	,000	,978	1,022
	F.D. Pixelpark AG	-1,452	,058	-,839	-24,829	,000	,921	1,086
	year frq ABROAD/TOT	,068	,029	,079	2,391	,018	,964	1,038
	HOME output gap	-3,031	1,038	-,099	-2,921	,004	,914	1,094

a Dependent Variable: ROA t+1

Tobin's Q 1 (t+1)

Model Summary (Tobin's Q 1 t+1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,815(a)	,664	,651	,473651762

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Nortel networks corp., F.D. Schering, F.D.CAE Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D.Royal Bank of Canada

ANOVA (Tobin's Q 1 t+1)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77,307	7	11,044	49,227	,000(a)
	Residual	39,036	174	,224		
	Total	116,343	181			

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Nortel networks corp., F.D. Schering, F.D.CAE Inc., F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D.Royal Bank of Canada
b Dependent Variable: 1) T'S Q t+1

Coefficients (Tobin's Q 1 t+1)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,403	,082		17,203	,000		
	F.D. ATS Automation Tooling Systems Inc	5,437	,345	,709	15,774	,000	,955	1,048
	F.D.CAE Inc.	,783	,175	,201	4,488	,000	,963	1,038
	F.D. Nortel networks corp.	,587	,120	,219	4,896	,000	,963	1,038
	F.D.Royal Bank of Canada	-,610	,171	-,165	-3,572	,000	,899	1,113
	F.D. Deutsche Bank	-,431	,122	-,161	-3,547	,001	,935	1,070
	F.D. Schering	1,300	,341	,170	3,811	,000	,974	1,027
	year frq ABROAD/TOT	,064	,119	,026	,539	,590	,811	1,232

a Dependent Variable: 1) T'S Q t+1

Tobin's Q 2 (t+1)

Model Summary (Tobin's Q 2 t+1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,809(a)	,655	,641	,539628207
2	,816(b)	,666	,651	,532433080

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Nortel networks corp., F.D.CAE Inc., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D.Royal Bank of Canada, F.D. Saputo Inc.
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Nortel networks corp., F.D.CAE Inc., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D.Royal Bank of Canada, F.D. Saputo Inc., Geographic region effect

ANOVA (Tobin's Q 2 t+1)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	96,224	7	13,746	47,206	,000(a)
	Residual	50,669	174	,291		
	Total	146,893	181			
2	Regression	97,850	8	12,231	43,146	,000(b)
	Residual	49,043	173	,283		
	Total	146,893	181			

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Nortel networks corp., F.D.CAE Inc., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D.Royal Bank of Canada, F.D. Saputo Inc.
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Nortel networks corp., F.D.CAE Inc., F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D.Royal Bank of Canada, F.D. Saputo Inc., Geographic region effect
c Dependent Variable: 2) T'S Q t+1

Coefficients (Tobin's Q 2 t+1)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,738	,100		7,382	,000		
	F.D. ATS Automation Tooling Systems Inc	5,825	,394	,676	14,767	,000	,946	1,057
	F.D.CAE Inc.	1,110	,200	,253	5,548	,000	,951	1,052
	F.D. Nortel networks corp.	,562	,138	,187	4,086	,000	,949	1,054
	F.D.Royal Bank of Canada	-,564	,194	-,136	-2,906	,004	,903	1,107
	F.D. Deutsche Bank	-,552	,138	-,183	-3,988	,000	,938	1,066
	F.D. Saputo Inc.	,888	,195	,214	4,560	,000	,898	1,114
	year frq ABROAD/TOT	-,013	,140	-,005	-,093	,926	,761	1,314
	(Constant)	,841	,108		7,818	,000		
	F.D. ATS Automation Tooling Systems Inc	5,723	,392	,664	14,617	,000	,935	1,070
	F.D.CAE Inc.	,989	,204	,226	4,852	,000	,892	1,121
	F.D. Nortel networks corp.	,434	,146	,144	2,978	,003	,822	1,217
	F.D.Royal Bank of Canada	-,718	,202	-,173	-3,553	,000	,812	1,231
	F.D. Deutsche Bank	-,454	,142	-,151	-3,191	,002	,862	1,161
	F.D. Saputo Inc.	,774	,198	,187	3,914	,000	,846	1,182
	year frq ABROAD/TOT	,038	,140	,014	,273	,785	,744	1,345
	Geographic region effect	-,239	,100	-,133	-2,395	,018	,628	1,592

a Dependent Variable: 2) T'S Q t+1

5.8.2 AVERAGE CORPORATE PERFORMANCE FOR THE THREE YEARS FOLLOWING LAYOFFS [MID TERM]

Independent variable: relative number of people laid off abroad over total per year

When post layoff performance are measured with a broader scope, that is, averaging the performance of the three years following the announcement year, accounting measures support the claim of the hypothesis with positive and significant (at 0,001 and 0,01 percent level) values for the independent variable. Nevertheless, the market measure does not draw the same conclusion. In fact, the abroad layoffs variables for both tests are negative and significant at 0,05 and 0,01 percent levels.

ROE M_{t+3}

Model Summary (ROE M_{t+3})

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,844(a)	,712	,707	,230841819
2	,852(b)	,725	,719	,226204340
3	,855(c)	,732	,724	,224126791

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp.
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., HOME output gap
c Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., HOME output gap, TARGET gdp growth

ANOVA (ROE M_{t+3})

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23,460	3	7,820	146,753	,000(a)
	Residual	9,485	178	,053		
	Total	32,946	181			
2	Regression	23,889	4	5,972	116,717	,000(b)
	Residual	9,057	177	,051		
	Total	32,946	181			
3	Regression	24,105	5	4,821	95,972	,000(c)
	Residual	8,841	176	,050		
	Total	32,946	181			

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp.
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., HOME output gap
c Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., HOME output gap, TARGET gdp growth
d Dependent Variable: ROE postL average 3

Coefficients (ROE M_{t+3})

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,028	,029		-,974	,331		
	F.D. Nortel networks corp.	-,808	,057	-,567	-14,074	,000	,996	1,004
	F.D. Pixelpark AG	-1,646	,105	-,632	-15,697	,000	,997	1,003
	x year ABROAD / TOT layoff	,177	,046	,154	3,836	,000	,999	1,001
2	(Constant)	-,036	,029		-1,249	,213		
	F.D. Nortel networks corp.	-,783	,057	-,549	-13,739	,000	,972	1,029
	F.D. Pixelpark AG	-1,565	,106	-,601	-14,709	,000	,929	1,076
	x year ABROAD / TOT layoff	,197	,046	,172	4,312	,000	,975	1,025
	HOME output gap	-5,544	1,916	-,120	-2,894	,004	,896	1,115

3	(Constant)	,017	,038		,448	,655		
	F.D. Nortel networks corp.	-,770	,057	-,540	-13,561	,000	,960	1,041
	F.D. Pixelpark AG	-1,585	,106	-,609	-14,971	,000	,922	1,085
	x year ABROAD / TOT layoff	,190	,045	,166	4,198	,000	,971	1,030
	HOME output gap	-5,013	1,915	-,109	-2,617	,010	,880	1,136
	TARGET gdp growth	-2,190	1,057	-,083	-2,073	,040	,959	1,042

a Dependent Variable: ROE postL average 3

ROA (M_{t+3})

Model Summary (ROA M_{t+3})

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,872(a)	,760	,753	,076544807
2	,882(b)	,777	,770	,073985514
3	,886(c)	,785	,777	,072867933

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc.
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc., HOME output gap
c Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc., HOME output gap, TARGET gdp growth

ANOVA (ROA M_{t+3})

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3,269	5	,654	111,585	,000(a)
	Residual	1,031	176	,006		
	Total	4,300	181			
2	Regression	3,342	6	,557	101,763	,000(b)
	Residual	,958	175	,005		
	Total	4,300	181			
3	Regression	3,376	7	,482	90,837	,000(c)
	Residual	,924	174	,005		
	Total	4,300	181			

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc.
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc., HOME output gap
c Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc., HOME output gap, TARGET gdp growth
d Dependent Variable: ROA postL average 3

Coefficients (ROA M_{t+3})

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,007	,010		-,674	,501		
	F.D. Nortel networks corp.	-,159	,019	-,309	-8,311	,000	,988	1,013
	F.D. Saputo Inc.	,091	,027	,129	3,436	,001	,968	1,033
	F.D. Sun Life Financial Inc.	,365	,055	,248	6,635	,000	,978	1,023
	F.D. Pixelpark AG	-,712	,035	-,757	-20,457	,000	,995	1,005
	x year ABROAD / TOT layoff	,041	,016	,100	2,644	,009	,954	1,048
2	(Constant)	-,011	,010		-1,141	,255		
	F.D. Nortel networks corp.	-,147	,019	-,286	-7,856	,000	,959	1,042
	F.D. Saputo Inc.	,105	,026	,148	4,031	,000	,949	1,054
	F.D. Sun Life Financial Inc.	,373	,053	,253	7,014	,000	,976	1,025
	F.D. Pixelpark AG	-,678	,035	-,721	-19,395	,000	,922	1,084
	x year ABROAD / TOT layoff	,051	,015	,123	3,308	,001	,928	1,078
	HOME output gap	-2,317	,633	-,139	-3,659	,000	,877	1,140
3	(Constant)	,009	,013		,750	,454		
	F.D. Nortel networks corp.	-,142	,019	-,276	-7,636	,000	,947	1,056
	F.D. Saputo Inc.	,109	,026	,153	4,246	,000	,945	1,058
	F.D. Sun Life Financial Inc.	,373	,052	,253	7,114	,000	,976	1,025
	F.D. Pixelpark AG	-,685	,035	-,728	-19,836	,000	,916	1,092
	x year ABROAD / TOT layoff	,048	,015	,117	3,211	,002	,925	1,081
	HOME output gap	-2,120	,629	-,127	-3,372	,001	,864	1,157
	TARGET gdp growth	-,871	,344	-,091	-2,532	,012	,955	1,047

a Dependent Variable: ROA postL average 3

Tobin's Q 1 M_{t+3}

Model Summary (Tobin's Q 1 M_{t+3})

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,919(a)	,844	,839	,330552460

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., F.D. Schering, F.D.Royal Bank of Canada

ANOVA (Tobin's Q 1 M_{t+3})

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103,540	6	17,257	157,934	,000(a)
	Residual	19,121	175	,109		
	Total	122,662	181			

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., F.D. Schering, F.D.Royal Bank of Canada
b Dependent Variable: 1) T'S Q postL average 3

Coefficients (Tobin's Q 1 M_{t+3})

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,662	,042		39,540	,000		
	F.D. ATS Automation Tooling Systems Inc	6,397	,237	,812	26,936	,000	,979	1,021
	F.D. Quebecor inc.	-,482	,094	-,156	-5,144	,000	,963	1,038
	F.D.Royal Bank of Canada	-,601	,121	-,159	-4,975	,000	,874	1,144
	F.D. Deutsche Bank	-,542	,083	-,197	-6,508	,000	,971	1,030
	F.D. Schering	1,733	,239	,220	7,254	,000	,967	1,034
	x year ABROAD / TOT layoff	-,184	,072	-,083	-2,559	,011	,838	1,194

a Dependent Variable: 1) T'S Q postL average 3

Tobin's Q 2 M_{t+3}

Model Summary (Tobin's Q 2 M_{t+3})

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,908(a)	,825	,819	,381330226
2	,920(b)	,847	,841	,357717559

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D. Saputo Inc., F.D.Royal Bank of Canada
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D. Saputo Inc., F.D.Royal Bank of Canada, Geographic region effect

ANOVA (Tobin's Q 2 M_{t+3})

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	120,127	6	20,021	137,685	,000(a)
	Residual	25,447	175	,145		
	Total	145,574	181			
2	Regression	123,308	7	17,615	137,662	,000(b)
	Residual	22,265	174	,128		
	Total	145,574	181			

a Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D. Saputo Inc., F.D.Royal Bank of Canada
b Predictors: (Constant), x year ABROAD / TOT layoff, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D. Saputo Inc., F.D.Royal Bank of Canada, Geographic region effect
c Dependent Variable: 2) T'S Q postL average 3

Coefficients (Tobin's Q 2 M_{t+3})

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,896	,050		17,907	,000		
	F.D. ATS Automation Tooling Systems Inc	6,859	,274	,800	25,011	,000	,977	1,023
	F.D.Royal Bank of Canada	-,526	,138	-,128	-3,799	,000	,887	1,128
	F.D. Deutsche Bank	-,628	,096	-,210	-6,565	,000	,979	1,021
	F.D. Schering	1,482	,275	,173	5,386	,000	,971	1,030
	F.D. Saputo Inc.	,926	,132	,225	6,995	,000	,969	1,032
	x year ABROAD / TOT layoff	-,187	,083	-,078	-2,248	,026	,838	1,194

2	(Constant)	1,056	,057		18,585	,000		
	F.D. ATS Automation Tooling Systems Inc	6,700	,259	,781	25,843	,000	,963	1,039
	F.D.Royal Bank of Canada	-,636	,132	-,154	-4,830	,000	,862	1,160
	F.D. Deutsche Bank	-,457	,096	-,153	-4,760	,000	,855	1,170
	F.D. Schering	1,675	,261	,195	6,418	,000	,950	1,053
	F.D. Saputo Inc.	,779	,128	,189	6,096	,000	,917	1,090
	x year ABROAD / TOT layoff	-,236	,079	-,098	-3,003	,003	,824	1,213
	Geographic region effect	-,303	,061	-,169	-4,987	,000	,765	1,307

a Dependent Variable: 2) T'S Q postL average 3

Independent variable: relative number of layoffs abroad over total per year

Analogues outcomes to the other dimension of the independent variable are obtain confronting average post-layoff performance and number of layoffs abroad per year. ROE and ROA prove to be positively related with the independent variable for both cases and with significance of 0,001 percent level. The relation with the market measure instead remains negative but statistically non-significant.

ROE (M_{t+3})

Model Summary (ROE M_{t+3})

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,851(a)	,725	,720	,225765158
2	,856(b)	,732	,726	,223162590

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp.
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., HOME output gap

ANOVA (ROE M_{t+3})

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23,873	3	7,958	156,125	,000(a)
	Residual	9,073	178	,051		
	Total	32,946	181			
2	Regression	24,131	4	6,033	121,135	,000(b)
	Residual	8,815	177	,050		
	Total	32,946	181			

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp.
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., HOME output gap
c Dependent Variable: ROE postL average 3

Coefficients (ROE M_{t+3})

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,094	,036		-2,600	,010		
	F.D. Nortel networks corp.	-,789	,056	-,553	-13,978	,000	,987	1,013
	F.D. Pixelpark AG	-1,695	,103	-,651	-16,454	,000	,988	1,012
	year frq ABROAD/TOT	,251	,052	,193	4,846	,000	,980	1,021
2	(Constant)	-,092	,036		-2,569	,011		
	F.D. Nortel networks corp.	-,770	,056	-,540	-13,652	,000	,965	1,036
	F.D. Pixelpark AG	-1,633	,105	-,628	-15,504	,000	,923	1,084
	year frq ABROAD/TOT	,250	,051	,192	4,895	,000	,980	1,021
	HOME output gap	-4,249	1,868	-,092	-2,275	,024	,918	1,089

a Dependent Variable: ROE postL average 3

ROA (M_{t+3})

Model Summary (ROA M_{t+3})

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,879(a)	,773	,766	,074496984
2	,887(b)	,786	,779	,072480350
3	,891(c)	,793	,785	,071486754

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc.
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc., HOME output gap
c Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc., HOME output gap, TARGET gdp growth

ANOVA (ROA M_{t+3})

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3,323	5	,665	119,765	,000(a)
	Residual	,977	176	,006		
	Total	4,300	181			
2	Regression	3,381	6	,563	107,257	,000(b)
	Residual	,919	175	,005		
	Total	4,300	181			
3	Regression	3,411	7	,487	95,351	,000(c)
	Residual	,889	174	,005		
	Total	4,300	181			

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc.
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc., HOME output gap
c Predictors: (Constant), year frq ABROAD/TOT, F.D. Pixelpark AG, F.D. Nortel networks corp., F.D. Sun Life Financial Inc., F.D. Saputo Inc., HOME output gap, TARGET gdp growth
d Dependent Variable: ROA postL average 3

Coefficients (ROA M_{t+3})

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,033	,013		-2,553	,012		
	F.D. Nortel networks corp.	-,152	,019	-,295	-8,093	,000	,975	1,026
	F.D. Saputo Inc.	,111	,027	,156	4,159	,000	,918	1,090
	F.D. Sun Life Financial Inc.	,358	,053	,243	6,702	,000	,982	1,018
	F.D. Pixelpark AG	-,726	,034	-,771	-21,330	,000	,987	1,014
	year frq ABROAD/TOT	,074	,018	,158	4,146	,000	,892	1,121
2	(Constant)	-,033	,012		-2,664	,008		
	F.D. Nortel networks corp.	-,142	,018	-,275	-7,677	,000	,949	1,053
	F.D. Saputo Inc.	,121	,026	,170	4,627	,000	,905	1,104
	F.D. Sun Life Financial Inc.	,369	,052	,250	7,083	,000	,978	1,022
	F.D. Pixelpark AG	-,696	,034	-,740	-20,289	,000	,919	1,089
	year frq ABROAD/TOT	,075	,017	,160	4,330	,000	,891	1,122
	HOME output gap	-2,023	,612	-,122	-3,306	,001	,902	1,108
3	(Constant)	-,013	,015		-,851	,396		
	F.D. Nortel networks corp.	-,137	,018	-,266	-7,476	,000	,938	1,066
	F.D. Saputo Inc.	,124	,026	,174	4,808	,000	,903	1,107
	F.D. Sun Life Financial Inc.	,369	,051	,250	7,180	,000	,978	1,022
	F.D. Pixelpark AG	-,702	,034	-,746	-20,695	,000	,914	1,095
	year frq ABROAD/TOT	,072	,017	,153	4,183	,000	,886	1,129
	HOME output gap	-1,849	,608	-,111	-3,041	,003	,890	1,124
	TARGET gdp growth	-,821	,338	-,086	-2,429	,016	,952	1,050

a Dependent Variable: ROA postL average 3

Tobin's Q 1 M_{t+3}

Model Summary (Tobin's Q 1 M_{t+3})

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,916(a)	,839	,833	,336129549

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Schering, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., F.D.Royal Bank of Canada

ANOVA (Tobin's Q 1 M_{t+3})

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102,889	6	17,148	151,777	,000(a)
	Residual	19,772	175	,113		
	Total	122,662	181			

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Schering, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Quebecor inc., F.D.Royal Bank of Canada
b Dependent Variable: 1) T'S Q postL average 3

Coefficients (Tobin's Q 1 M_{t+3})

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,620	,058		28,169	,000		
	F.D. ATS Automation Tooling Systems Inc	6,439	,245	,818	26,330	,000	,955	1,047
	F.D. Quebecor inc.	-,531	,096	-,172	-5,513	,000	,943	1,060
	F.D.Royal Bank of Canada	-,679	,121	-,179	-5,611	,000	,902	1,108
	F.D. Deutsche Bank	-,551	,086	-,201	-6,421	,000	,944	1,059
	F.D. Schering	1,656	,242	,210	6,841	,000	,975	1,026
	year frq ABROAD/TOT	-,065	,085	-,026	-,756	,451	,799	1,252

a Dependent Variable: 1) T'S Q postL average 3

Tobin's Q 2 M_{t+3}

Model Summary (Tobin's Q 2 M_{t+3})

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,906(a)	,821	,815	,385922172
2	,916(b)	,839	,833	,366867459

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Schering, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D.Royal Bank of Canada
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Schering, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D.Royal Bank of Canada, Geographic region effect

ANOVA (Tobin's Q 2 M_{t+3})

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	119,510	6	19,918	133,738	,000(a)
	Residual	26,064	175	,149		
	Total	145,574	181			
2	Regression	122,155	7	17,451	129,657	,000(b)
	Residual	23,419	174	,135		
	Total	145,574	181			

a Predictors: (Constant), year frq ABROAD/TOT, F.D. Schering, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D.Royal Bank of Canada
b Predictors: (Constant), year frq ABROAD/TOT, F.D. Schering, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D.Royal Bank of Canada, Geographic region effect
c Dependent Variable: 2) T'S Q postL average 3

Coefficients (Tobin's Q 2 M_{t+3})

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,861	,067		12,944	,000		
	F.D. ATS Automation Tooling Systems Inc	6,894	,281	,804	24,543	,000	,954	1,048
	F.D.Royal Bank of Canada	-,589	,139	-,143	-4,242	,000	,902	1,109
	F.D. Deutsche Bank	-,627	,098	-,209	-6,373	,000	,947	1,056
	F.D. Schering	1,419	,278	,165	5,106	,000	,975	1,026

	F.D. Saputo Inc.	,937	,137	,227	6,814	,000	,921	1,085
	year frq ABROAD/TOT	-,089	,099	-,032	-,890	,375	,775	1,290
2	(Constant)	,938	,066		14,302	,000		
	F.D. ATS Automation Tooling Systems Inc	6,818	,268	,795	25,480	,000	,950	1,052
	F.D.Royal Bank of Canada	-,751	,137	-,182	-5,481	,000	,838	1,193
	F.D. Deutsche Bank	-,490	,099	-,164	-4,973	,000	,854	1,171
	F.D. Schering	1,537	,266	,179	5,789	,000	,965	1,036
	F.D. Saputo Inc.	,841	,132	,204	6,354	,000	,897	1,115
	year frq ABROAD/TOT	-,003	,096	-,001	-,033	,974	,744	1,343
	Geographic region effect	-,280	,063	-,156	-4,433	,000	,746	1,340

a Dependent Variable: 2) T'S Q postL average 3

5.8.3 SUMMARY

Regarding hypothesis 3, the additional analysis provides new evidences on which to discuss.

As emerges from the tables, the market measure of performance tends to reject the hypothesis for both its operationalizations (Tobin's Q 1 and 2). Despite the number of times multinationals lay off in a year yielded contrasting and un-significant result, the total number of people laid off provided negative and significant beta outcomes.

In terms of accounting measurements instead, the positive relation between abroad layoffs and performance is verified for both the total number of people dismissed per year and the amount of layoffs occurred in a year. Yet, all the betas of the independent variables are at least significant at 0,1 percent level.

Finally, neither correlation nor multicollinearity issues are present.

In light of these findings, it can be concluded that the markets do not respond positively to companies which implement downsizing prevalently abroad, preferring at home layoffs for awarding potential performance premiums.

On the other end, abroad downsizing strategies demonstrated to be able to improve company performance in terms of economic returns. As a matter of fact, both total number of people laid off per year and total number of layoff occurred per year support the claim put forward by hypothesis three.

Appendix 5.9 SPSS outputs hypothesis 4

This appendix contains more comprehensive SPSS outputs regarding hypothesis four. It is divided into four sections according to the four performance indexes used as dependent variable and each section is in turn categorised according to the dimension of layoff assessed.

Appendix 5.9.1 DEPENDENT VARIABLE: AVERAGE ROE POST-LAYOFF FOLLOWING 3 YEARS

Layoff in absolute numbers

Model Summary (ROE average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,839(a)	,704	,696	,235207225
2	,849(b)	,720	,710	,229597911

a Predictors: (Constant), MixZ_Amount, F.D. Pixelpark AG, Geographic Distance, F.D. Nortel networks corp., N. of employees laid off
b Predictors: (Constant), MixZ_Amount, F.D. Pixelpark AG, Geographic Distance, F.D. Nortel networks corp., N. of employees laid off, TARGET gdp growth

ANOVA (ROE average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23,209	5	4,642	83,904	,000(a)
	Residual	9,737	176	,055		
	Total	32,946	181			
2	Regression	23,721	6	3,953	74,996	,000(b)
	Residual	9,225	175	,053		
	Total	32,946	181			

a Predictors: (Constant), MixZ_Amount, F.D. Pixelpark AG, Geographic Distance, F.D. Nortel networks corp., N. of employees laid off
b Predictors: (Constant), MixZ_Amount, F.D. Pixelpark AG, Geographic Distance, F.D. Nortel networks corp., N. of employees laid off, TARGET gdp growth
c Dependent Variable: ROE postL average 3

Coefficients (ROE average t+3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,018	,024		,778	,438		
	F.D. Nortel networks corp.	-,833	,059	-,585	-14,151	,000	,983	1,017
	F.D. Pixelpark AG	-1,639	,107	-,630	-15,300	,000	,991	1,009
	N. of employees laid off	$2{,}11E^{-06}$	,000	,017	,340	,734	,709	1,410
	Geographic Distance	$1{,}61E^{-05}$	,000	,125	3,035	,003	,989	1,012
	MixZ_Amount	-,010	,018	-,025	-,524	,601	,713	1,403
2	(Constant)	,099	,035		2,860	,005		
	F.D. Nortel networks corp.	-,815	,058	-,572	-14,091	,000	,972	1,028
	F.D. Pixelpark AG	-1,664	,105	-,639	-15,866	,000	,986	1,015
	N. of employees laid off	$-3{,}46E^{-06}$	,000	-,027	-,548	,584	,652	1,533
	Geographic Distance	$1{,}88E^{-05}$	,000	,146	3,581	,000	,962	1,040
	MixZ_Amount	-,001	,018	-,002	-,032	,975	,695	1,440
	TARGET gdp growth	-3,522	1,130	-,133	-3,115	,002	,880	1,137

a Dependent Variable: ROE postL average 3

Layoff size relative to total employees

Model Summary (ROE average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,839(a)	,704	,696	,235307613
2	,848(b)	,719	,710	,229866909

a Predictors: (Constant), MixZ_TS, F.D. Pixelpark AG, F.D. Nortel networks corp., Geographic Distance, Total Share of layoffs
b Predictors: (Constant), MixZ_TS, F.D. Pixelpark AG, F.D. Nortel networks corp., Geographic Distance, Total Share of layoffs, TARGET gdp growth

ANOVA (ROE average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23,201	5	4,640	83,803	,000(a)
	Residual	9,745	176	,055		
	Total	32,946	181			
2	Regression	23,699	6	3,950	74,752	,000(b)
	Residual	9,247	175	,053		
	Total	32,946	181			

a Predictors: (Constant), MixZ_TS, F.D. Pixelpark AG, F.D. Nortel networks corp., Geographic Distance, Total Share of layoffs
b Predictors: (Constant), MixZ_TS, F.D. Pixelpark AG, F.D. Nortel networks corp., Geographic Distance, Total Share of layoffs, TARGET gdp growth
c Dependent Variable: ROE postL average 3

Coefficients (ROE average t+3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,016	,026		,615	,540		
	F.D. Nortel networks corp.	-,833	,059	-,585	-14,163	,000	,986	1,014
	F.D. Pixelpark AG	-1,657	,118	-,637	-14,073	,000	,821	1,218
	Total Share of layoffs	,286	,872	,015	,328	,743	,793	1,261
	Geographic Distance	1,65E-05	,000	,129	3,051	,003	,944	1,059
	MixZ_TS	,004	,019	,008	,198	,843	,938	1,066
2	(Constant)	,095	,036		2,621	,010		
	F.D. Nortel networks corp.	-,813	,058	-,571	-14,059	,000	,974	1,027
	F.D. Pixelpark AG	-1,649	,115	-,633	-14,328	,000	,821	1,219
	Total Share of layoffs	-,189	,866	-,010	-,218	,828	,768	1,302
	Geographic Distance	1,85E-05	,000	,144	3,466	,001	,931	1,075
	MixZ_TS	-,002	,019	-,004	-,095	,925	,930	1,076
	TARGET gdp growth	-3,395	1,106	-,128	-3,071	,002	,922	1,085

a Dependent Variable: ROE postL average 3

Layoff size relative to local employees

Model Summary (ROE average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,840(a)	,705	,697	,234897882
2	,849(b)	,720	,711	,229394169

a Predictors: (Constant), MixZ_LS, F.D. Pixelpark AG, F.D. Nortel networks corp., Geographic Distance, Local Share of layoffs
b Predictors: (Constant), MixZ_LS, F.D. Pixelpark AG, F.D. Nortel networks corp., Geographic Distance, Local Share of layoffs, TARGET gdp growth

ANOVA (ROE average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23,235	5	4,647	84,218	,000(a)
	Residual	9,711	176	,055		
	Total	32,946	181			
2	Regression	23,737	6	3,956	75,181	,000(b)
	Residual	9,209	175	,053		
	Total	32,946	181			

a Predictors: (Constant), MixZ_LS, F.D. Pixelpark AG, F.D. Nortel networks corp., Geographic Distance, Local Share of layoffs
b Predictors: (Constant), MixZ_LS, F.D. Pixelpark AG, F.D. Nortel networks corp., Geographic Distance, Local Share of layoffs, TARGET gdp growth
c Dependent Variable: ROE postL average 3

Coefficients (ROE average t+3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,020	,023		,846	,399		
	F.D. Nortel networks corp.	-,839	,059	-,588	-14,192	,000	,974	1,026
	F.D. Pixelpark AG	-1,656	,131	-,636	-12,634	,000	,661	1,514
	Local Share of layoffs	,025	,131	,013	,187	,852	,365	2,738
	Geographic Distance	$1{,}74E^{-05}$	,000	,136	2,943	,004	,789	1,267
	MixZ_LS	-,011	,015	-,044	-,755	,451	,497	2,013
2	(Constant)	,089	,032		2,778	,006		
	F.D. Nortel networks corp.	-,811	,058	-,569	-13,887	,000	,951	1,051
	F.D. Pixelpark AG	-1,724	,130	-,662	-13,274	,000	,641	1,559
	Local Share of layoffs	,111	,131	,057	,848	,398	,349	2,869
	Geographic Distance	$1{,}75E^{-05}$	,000	,137	3,035	,003	,789	1,267
	MixZ_LS	-,011	,015	-,041	-,724	,470	,497	2,014
	TARGET gdp growth	-3,500	1,133	-,132	-3,090	,002	,874	1,144

a Dependent Variable: ROE postL average 3

Appendix 5.9.2 DEPENDENT VARIABLE: AVERAGE ROA POST-LAYOFF FOLLOWING 3 YEARS

Layoff size in absolute numbers

Model Summary (ROA average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,873(a)	,762	,753	,076661694
2	,882(b)	,778	,767	,074322616
3	,888(c)	,788	,777	,072835668

a Predictors: (Constant), MixZ_Amount, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, N. of employees laid off
b Predictors: (Constant), MixZ_Amount, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, N. of employees laid off, TARGET gdp growth
c Predictors: (Constant), MixZ_Amount, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, N. of employees laid off, TARGET gdp growth, HOME output gap

ANOVA (ROA average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3,278	7	,468	79,670	,000(a)
	Residual	1,023	174	,006		
	Total	4,300	181			
2	Regression	3,345	8	,418	75,683	,000(b)
	Residual	,956	173	,006		
	Total	4,300	181			
3	Regression	3,388	9	,376	70,953	,000(c)
	Residual	,912	172	,005		
	Total	4,300	181			

a Predictors: (Constant), MixZ_Amount, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, N. of employees laid off
b Predictors: (Constant), MixZ_Amount, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, N. of employees laid off, TARGET gdp growth
c Predictors: (Constant), MixZ_Amount, F.D. Pixelpark AG, F.D. Sun Life Financial Inc., F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, N. of employees laid off, TARGET gdp growth, HOME output gap
d Dependent Variable: ROA postL average 3

Coefficients (ROA average t+3)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,000	,008		,046	,963		
	F.D. Nortel networks corp.	-,165	,019	-,321	-8,586	,000	,976	1,024
	F.D. Saputo Inc.	,094	,027	,133	3,511	,001	,954	1,048
	F.D. Sun Life Financial Inc.	,370	,055	,251	6,746	,000	,986	1,014
	F.D. Pixelpark AG	-,709	,035	-,754	-20,262	,000	,988	1,012
	N. of employees laid off	1,41E^{-06}	,000	,031	,691	,490	,699	1,431
	Geographic Distance	4,80E^{-06}	,000	,103	2,734	,007	,956	1,046
	MixZ_Amount	-,005	,006	-,039	-,890	,375	,706	1,417
2	(Constant)	,029	,011		2,560	,011		
	F.D. Nortel networks corp.	-,158	,019	-,307	-8,422	,000	,965	1,037
	F.D. Saputo Inc.	,102	,026	,143	3,897	,000	,948	1,055
	F.D. Sun Life Financial Inc.	,366	,053	,248	6,868	,000	,986	1,014

	F.D. Pixelpark AG	-,717	,034	-,763	-21,097	,000	,983	1,018
	N. of employees laid off	-5,48E-07	,000	-,012	-,267	,790	,646	1,547
	Geographic Distance	5,87E-06	,000	,126	3,393	,001	,926	1,080
	MixZ_Amount	-,002	,006	-,016	-,378	,706	,690	1,450
	TARGET gdp growth	-1,279	,367	-,134	-3,482	,001	,873	1,146
3	(Constant)	,027	,011		2,368	,019		
	F.D. Nortel networks corp.	-,150	,019	-,292	-8,078	,000	,944	1,060
	F.D. Saputo Inc.	,109	,026	,154	4,245	,000	,938	1,066
	F.D. Sun Life Financial Inc.	,375	,052	,255	7,182	,000	,981	1,019
	F.D. Pixelpark AG	-,690	,035	-,734	-19,931	,000	,910	1,100
	N. of employees laid off	-4,96E-07	,000	-,011	-,247	,805	,646	1,547
	Geographic Distance	5,96E-06	,000	,128	3,515	,001	,926	1,080
	MixZ_Amount	-,00039	,006	-,003	-,067	,947	,681	1,468
	TARGET gdp growth	-1,164	,362	-,122	-3,214	,002	,862	1,160
	HOME output gap	-1,783	,625	-,107	-2,852	,005	,873	1,146

a Dependent Variable: ROA postL average 3

Layoff size relative to total employees

Model Summary (ROA average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,873(a)	,762	,753	,076660512
2	,883(b)	,780	,770	,073944218
3	,888(c)	,789	,778	,072587528

a Predictors: (Constant), MixZ_TS, F.D. Pixelpark AG, F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, F.D. Sun Life Financial Inc., Total Share of layoffs
b Predictors: (Constant), MixZ_TS, F.D. Pixelpark AG, F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, F.D. Sun Life Financial Inc., Total Share of layoffs, TARGET gdp growth
c Predictors: (Constant), MixZ_TS, F.D. Pixelpark AG, F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, F.D. Sun Life Financial Inc., Total Share of layoffs, TARGET gdp growth, HOME output gap

ANOVA (ROA average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3,278	7	,468	79,673	,000(a)
	Residual	1,023	174	,006		
	Total	4,300	181			
2	Regression	3,354	8	,419	76,682	,000(b)
	Residual	,946	173	,005		
	Total	4,300	181			
3	Regression	3,394	9	,377	71,570	,000(c)
	Residual	,906	172	,005		
	Total	4,300	181			

a Predictors: (Constant), MixZ_TS, F.D. Pixelpark AG, F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, F.D. Sun Life Financial Inc., Total Share of layoffs
b Predictors: (Constant), MixZ_TS, F.D. Pixelpark AG, F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, F.D. Sun Life Financial Inc., Total Share of layoffs, TARGET gdp growth
c Predictors: (Constant), MixZ_TS, F.D. Pixelpark AG, F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, F.D. Sun Life Financial Inc., Total Share of layoffs, TARGET gdp growth, HOME output gap
d Dependent Variable: ROA postL average 3

Coefficients (ROA average t+3)

		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
Model		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,004	,009		,393	,695		
	F.D. Nortel networks corp.	-,166	,019	-,323	-8,649	,000	,981	1,019
	F.D. Pixelpark AG	-,708	,039	-,753	-18,212	,000	,800	1,250
	F.D. Saputo Inc.	,091	,027	,129	3,437	,001	,970	1,031
	F.D. Sun Life Financial Inc.	,389	,061	,264	6,403	,000	,804	1,244
	Total Share of layoffs	-,073	,302	-,011	-,242	,809	,701	1,426
	Geographic Distance	4,41E-06	,000	,095	2,414	,017	,883	1,132
	MixZ_TS	-,006	,007	-,038	-,927	,355	,827	1,209

2	(Constant)	,034	,012		2,877	,005		
	F.D. Nortel networks corp.	-,158	,019	-,306	-8,438	,000	,966	1,035
	F.D. Pixelpark AG	-,702	,038	-,747	-18,727	,000	,799	1,252
	F.D. Saputo Inc.	,102	,026	,145	3,965	,000	,957	1,045
	F.D. Sun Life Financial Inc.	,403	,059	,273	6,862	,000	,801	1,249
	Total Share of layoffs	-,283	,297	-,041	-,952	,342	,676	1,479
	Geographic Distance	5,20E-06	,000	,112	2,931	,004	,870	1,149
	MixZ_TS	-,009	,007	-,054	-1,379	,170	,817	1,225
	TARGET gdp growth	-1,343	,359	-,140	-3,744	,000	,906	1,103
3	(Constant)	,030	,012		2,527	,012		
	F.D. Nortel networks corp.	-,150	,019	-,292	-8,116	,000	,946	1,057
	F.D. Pixelpark AG	-,682	,038	-,725	-18,123	,000	,766	1,305
	F.D. Saputo Inc.	,110	,026	,155	4,303	,000	,947	1,056
	F.D. Sun Life Financial Inc.	,403	,058	,273	6,980	,000	,801	1,249
	Total Share of layoffs	-,188	,293	-,027	-,640	,523	,667	1,500
	Geographic Distance	5,44E-06	,000	,117	3,119	,002	,868	1,152
	MixZ_TS	-,007	,006	-,042	-1,087	,279	,806	1,240
	TARGET gdp growth	-1,208	,356	-,126	-3,399	,001	,889	1,125
	HOME output gap	-1,710	,623	-,103	-2,744	,007	,872	1,147

a Dependent Variable: ROA postL average 3

Layoff size relative to local employees

Model Summary (ROA average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,526(a)	,277	,256	,132915769
2	,574(b)	,329	,306	,128372669

a Predictors: (Constant), MixZ_LS, F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, Local Share of layoffs
b Predictors: (Constant), MixZ_LS, F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, Local Share of layoffs, HOME output gap

ANOVA (ROA average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,191	5	,238	13,481	,000(a)
	Residual	3,109	176	,018		
	Total	4,300	181			
2	Regression	1,416	6	,236	14,323	,000(b)
	Residual	2,884	175	,016		
	Total	4,300	181			

a Predictors: (Constant), MixZ_LS, F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, Local Share of layoffs
b Predictors: (Constant), MixZ_LS, F.D. Saputo Inc., F.D. Nortel networks corp., Geographic Distance, Local Share of layoffs, HOME output gap
c Dependent Variable: ROA postL average 3

Coefficients (ROA average t+3)

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
Model		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,008	,014		,549	,584		
	F.D. Nortel networks corp.	-,168	,033	-,326	-5,008	,000	,971	1,030
	F.D. Saputo Inc.	,088	,046	,124	1,903	,059	,961	1,040
	Local Share of layoffs	-,368	,061	-,525	-6,056	,000	,546	1,832
	Geographic Distance	1,25E-05	,000	,270	3,786	,000	,809	1,237
	MixZ_LS	,023	,008	,248	2,943	,004	,577	1,733
2	(Constant)	,006	,013		,472	,637		
	F.D. Nortel networks corp.	-,148	,033	-,288	-4,518	,000	,945	1,058
	F.D. Saputo Inc.	,107	,045	,151	2,382	,018	,949	1,054
	Local Share of layoffs	-,330	,060	-,471	-5,528	,000	,529	1,890
	Geographic Distance	1,19E-05	,000	,256	3,712	,000	,806	1,240
	MixZ_LS	,024	,008	,250	3,063	,003	,577	1,733
	HOME output gap	-3,954	1,069	-,238	-3,698	,000	,927	1,079

a Dependent Variable: ROA postL average 3

Appendix 5.9.3 DEPENDENT VARIABLE: AVERAGE TOBIN'S Q 1 POST-LAYOFF FOLLOWING 3 YEARS

Layoff size in absolute numbers

Model Summary (T's Q 1) average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,918(a)	,842	,835	,334548166

a Predictors: (Constant), InteractionDisAbsoluteN, Geographic Distance, N. of employees laid off

ANOVA (T's Q 1) average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103,299	8	12,912	115,369	,000(a)
	Residual	19,363	173	,112		
	Total	122,662	181			

a Predictors: (Constant), MixZ_Amount, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D.Royal Bank of Canada, F.D. Quebecor inc., Geographic Distance, N. of employees laid off
b Dependent Variable: 1) T'S Q postL average 3

Coefficients (T's Q 1) average t+3)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,621	,036		45,252	,000		
	F.D. ATS Automation Tooling Systems Inc	6,436	,239	,817	26,879	,000	,987	1,013
	F.D. Quebecor inc.	-,545	,095	-,177	-5,718	,000	,953	1,049
	F.D.Royal Bank of Canada	-,693	,118	-,183	-5,857	,000	,934	1,071
	F.D. Deutsche Bank	-,558	,084	-,203	-6,641	,000	,978	1,023
	F.D. Schering	1,677	,245	,213	6,839	,000	,941	1,063
	N. of employees laid off	$-1{,}54E^{-06}$	,000	-,062	-1,735	,084	,704	1,421
	Geographic Distance	$-8{,}06E^{-06}$	,000	-,033	-1,008	,315	,878	1,139
	MixZ_Amount	,015	,026	,020	,568	,571	,706	1,416

a Dependent Variable: 1) T'S Q postL average 3

Layoff size relative to total employees

Model Summary (T's Q 1) average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,917(a)	,840	,833	,336831831
2	,918(b)	,844	,835	,333990542

a Predictors: (Constant), MixZ_TS, F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D. Schering, F.D. Quebecor inc., F.D.Royal Bank of Canada, Total Share of layoffs, Geographic Distance
b Predictors: (Constant), MixZ_TS, F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D. Schering, F.D. Quebecor inc., F.D.Royal Bank of Canada, Total Share of layoffs, Geographic Distance, TARGET gdp growth

ANOVA (T's Q 1) average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103,034	8	12,879	113,518	,000(a)
	Residual	19,628	173	,113		
	Total	122,662	181			
2	Regression	103,475	9	11,497	103,068	,000(b)
	Residual	19,187	172	,112		
	Total	122,662	181			

a Predictors: (Constant), MixZ_TS, F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D. Schering, F.D. Quebecor inc., F.D.Royal Bank of Canada, Total Share of layoffs, Geographic Distance
b Predictors: (Constant), MixZ_TS, F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D. Schering, F.D. Quebecor inc., F.D.Royal Bank of Canada, Total Share of layoffs, Geographic Distance, TARGET gdp growth
c Dependent Variable: 1) T'S Q postL average 3

Coefficients (T's Q 1) average t+3)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,602	,040		39,789	,000		
	F.D. ATS Automation Tooling Systems Inc	6,451	,241	,819	26,790	,000	,989	1,011
	F.D. Quebecor inc.	-,524	,096	-,170	-5,446	,000	,948	1,055
	F.D.Royal Bank of Canada	-,692	,121	-,183	-5,725	,000	,909	1,101
	F.D. Deutsche Bank	-,557	,085	-,203	-6,587	,000	,977	1,023
	F.D. Schering	1,671	,247	,212	6,755	,000	,938	1,067
	Total Share of layoffs	-,060	1,153	-,002	-,052	,958	,929	1,077
	Geographic Distance	$-9{,}15E^{-06}$	,000	-,037	-1,122	,263	,855	1,170
	MixZ_TS	-,025	,028	-,028	-,895	,372	,916	1,092
2	(Constant)	1,530	,054		28,258	,000		
	F.D. ATS Automation Tooling Systems Inc	6,445	,239	,818	26,989	,000	,989	1,011
	F.D. Quebecor inc.	-,545	,096	-,177	-5,674	,000	,937	1,067
	F.D.Royal Bank of Canada	-,699	,120	-,185	-5,834	,000	,908	1,102
	F.D. Deutsche Bank	-,562	,084	-,204	-6,691	,000	,977	1,024
	F.D. Schering	1,656	,245	,210	6,747	,000	,937	1,068
	Total Share of layoffs	,336	1,161	,009	,290	,772	,901	1,109
	Geographic Distance	$-1{,}12E^{-05}$	,000	-,045	-1,376	,171	,841	1,189
	MixZ_TS	-,020	,028	-,022	-,704	,483	,907	1,102
	TARGET gdp growth	3,195	1,607	,062	1,989	,048	,922	1,085

a Dependent Variable: 1) T'S Q postL average 3

Layoff size relative to local employees

Model Summary (T's Q 1) average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,917(a)	,840	,833	,336470830
2	,919(b)	,845	,837	,332077669

a Predictors: (Constant), Interaction DisLocalShare, Geographic Distance, Local Share of layoffs

ANOVA (T's Q 1) average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103,076	8	12,884	113,808	,000(a)
	Residual	19,586	173	,113		
	Total	122,662	181			
2	Regression	103,694	9	11,522	104,480	,000(b)
	Residual	18,967	172	,110		
	Total	122,662	181			

a Predictors: (Constant), Interaction DisLocalShare, Geographic Distance, Local Share of layoffs
b Dependent Variable: 1) T'S Q postL average 3

Coefficients (T's Q 1) average t+3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,607	,036		44,154	,000		
	F.D. ATS Automation Tooling Systems Inc	6,459	,241	,820	26,845	,000	,989	1,011
	F.D. Quebecor inc.	-,533	,097	-,173	-5,519	,000	,940	1,064
	F.D.Royal Bank of Canada	-,627	,140	-,166	-4,471	,000	,673	1,487
	F.D. Deutsche Bank	-,563	,085	-,205	-6,645	,000	,971	1,030
	F.D. Schering	1,649	,249	,209	6,633	,000	,926	1,080
	Local Share of layoffs	-,092	,157	-,024	-,585	,559	,526	1,900
	Geographic Distance	$-4{,}74E^{-06}$	,000	-,019	-,548	,584	,760	1,316
	MixZ_LS	-,010	,024	-,019	-,406	,685	,418	2,391
2	(Constant)	1,532	,048		32,041	,000		
	F.D. ATS Automation Tooling Systems Inc	6,453	,237	,819	27,171	,000	,989	1,012
	F.D. Quebecor inc.	-,563	,096	-,183	-5,855	,000	,924	1,082
	F.D.Royal Bank of Canada	-,621	,138	-,164	-4,482	,000	,672	1,487
	F.D. Deutsche Bank	-,570	,084	-,207	-6,811	,000	,970	1,031
	F.D. Schering	1,604	,246	,204	6,516	,000	,920	1,087
	Local Share of layoffs	-,146	,156	-,039	-,931	,353	,515	1,941
	Geographic Distance	$-5{,}88E^{-06}$	,000	-,024	-,689	,492	,758	1,320
	MixZ_LS	-,014	,023	-,027	-,587	,558	,416	2,405
	TARGET gdp growth	3,829	1,617	,075	2,368	,019	,900	1,112

a Dependent Variable: 1) T'S Q postL average 3

Appendix 5.9.4 DEPENDENT VARIABLE: AVERAGE TOBIN'S Q 2 POST-LAYOFF FOLLOWING 3 YEARS

Layoff size in absolute numbers

Model Summary (T's Q 2) average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,907(a)	,822	,814	,387101961
2	,916(b)	,839	,831	,368881135

a Predictors: (Constant), MixZ_Amount, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D. Saputo Inc., F.D.Royal Bank of Canada, Geographic Distance, N. of employees laid off
b Predictors: (Constant), MixZ_Amount, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D. Saputo Inc., F.D.Royal Bank of Canada, Geographic Distance, N. of employees laid off, Geographic region effect

ANOVA (T's Q 2) average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	119,650	8	14,956	99,810	,000(a)
	Residual	25,924	173	,150		
	Total	145,574	181			
2	Regression	122,169	9	13,574	99,758	,000(b)
	Residual	23,405	172	,136		
	Total	145,574	181			

a Predictors: (Constant), MixZ_Amount, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D. Saputo Inc., F.D.Royal Bank of Canada, Geographic Distance, N. of employees laid off
b Predictors: (Constant), MixZ_Amount, F.D. Deutsche Bank, F.D. ATS Automation Tooling Systems Inc, F.D. Schering, F.D. Saputo Inc., F.D.Royal Bank of Canada, Geographic Distance, N. of employees laid off, Geographic region effect
c Dependent Variable: 2) T'S Q postL average 3

Coefficients (T's Q 2) average t+3)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,825	,041		20,205	,000		
	F.D. ATS Automation Tooling Systems Inc	6,928	,277	,808	25,013	,000	,988	1,013
	F.D.Royal Bank of Canada	-,639	,137	-,155	-4,669	,000	,935	1,070
	F.D. Deutsche Bank	-,644	,097	-,215	-6,634	,000	,981	1,019
	F.D. Schering	1,372	,284	,160	4,834	,000	,941	1,063
	F.D. Saputo Inc.	,951	,135	,231	7,022	,000	,954	1,048
	N. of employees laid off	$-1{,}32E^{-05}$	,000	-,049	-1,285	,200	,702	1,425
	Geographic Distance	$6{,}26E^{-07}$	,000	,002	,068	,946	,877	1,141
	MixZ_Amount	,014	,031	,018	,474	,636	,704	1,420
2	(Constant)	,940	,047		19,924	,000		
	F.D. ATS Automation Tooling Systems Inc	6,817	,265	,795	25,706	,000	,978	1,022
	F.D.Royal Bank of Canada	-,749	,133	-,182	-5,638	,000	,900	1,111
	F.D. Deutsche Bank	-,489	,099	-,163	-4,924	,000	,852	1,174
	F.D. Schering	1,545	,273	,180	5,652	,000	,920	1,086
	F.D. Saputo Inc.	,840	,132	,204	6,382	,000	,918	1,090
	N. of employees laid off	$5{,}84E^{-07}$	,000	,002	,057	,955	,634	1,578
	Geographic Distance	$-1{,}73E^{-06}$	,000	-,006	-,195	,845	,873	1,145
	MixZ_Amount	-,007	,030	-,009	-,245	,807	,684	1,463
	Geographic region effect	-,282	,066	-,157	-4,303	,000	,700	1,429

a Dependent Variable: 2) T'S Q postL average 3

Layoff size relative to total employees

Model Summary (T's Q 2) average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,907(a)	,822	,814	,386494662
2	,917(b)	,841	,833	,366392567

a Predictors: (Constant), MixZ_TS, F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D. Saputo Inc., F.D. Schering, Total Share of layoffs, F.D.Royal Bank of Canada, Geographic Distance
b Predictors: (Constant), MixZ_TS, F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D. Saputo Inc., F.D. Schering, Total Share of layoffs, F.D.Royal Bank of Canada, Geographic Distance, Geographic region effect

ANOVA (T's Q 2) average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	119,731	8	14,966	100,192	,000(a)
	Residual	25,842	173	,149		
	Total	145,574	181			
2	Regression	122,484	9	13,609	101,378	,000(b)
	Residual	23,090	172	,134		
	Total	145,574	181			

a Predictors: (Constant), MixZ_TS, F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D. Saputo Inc., F.D. Schering, Total Share of layoffs, F.D.Royal Bank of Canada, Geographic Distance
b Predictors: (Constant), MixZ_TS, F.D. ATS Automation Tooling Systems Inc, F.D. Deutsche Bank, F.D. Saputo Inc., F.D. Schering, Total Share of layoffs, F.D.Royal Bank of Canada, Geographic Distance, Geographic region effect
c Dependent Variable: 2) T'S Q postL average 3

Coefficients (T's Q 2) average t+3)

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	,827	,045		18,359	,000		
F.D. ATS Automation Tooling Systems Inc	6,940	,276	,809	25,120	,000	,989	1,011
F.D.Royal Bank of Canada	-,663	,139	-,161	-4,784	,000	,910	1,099
F.D. Deutsche Bank	-,642	,097	-,214	-6,628	,000	,981	1,019
F.D. Schering	1,343	,284	,156	4,730	,000	,938	1,067
F.D. Saputo Inc.	,968	,134	,235	7,206	,000	,968	1,033
Total Share of layoffs	-1,013	1,316	-,025	-,770	,443	,939	1,065
Geographic Distance	$-1{,}72E^{-06}$	,000	-,006	-,184	,854	,854	1,172
MixZ_TS	-,046	,032	-,047	-1,415	,159	,918	1,089
2 (Constant)	,953	,051		18,697	,000		
F.D. ATS Automation Tooling Systems Inc	6,805	,264	,793	25,821	,000	,977	1,024
F.D.Royal Bank of Canada	-,778	,134	-,189	-5,816	,000	,877	1,140
F.D. Deutsche Bank	-,486	,098	-,162	-4,960	,000	,861	1,162
F.D. Schering	1,515	,272	,177	5,575	,000	,919	1,088
F.D. Saputo Inc.	,838	,131	,203	6,417	,000	,921	1,086
Total Share of layoffs	-,688	1,250	-,017	-,551	,583	,936	1,069
Geographic Distance	$-3{,}91E^{-06}$	,000	-,014	-,440	,661	,851	1,175
MixZ_TS	-,047	,031	-,048	-1,530	,128	,918	1,089
Geographic region effect	-,281	,062	-,157	-4,528	,000	,772	1,296

a Dependent Variable: 2) T'S Q postL average 3

Layoff relative to local employees

Model Summary (T's Q 2) average t+3)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,909(a)	,827	,819	,381732209
2	,919(b)	,844	,836	,363632301
3	,921(c)	,848	,839	,359872298

a Predictors: (Constant), MixZ_LS, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D. Schering, F.D. Deutsche Bank, Geographic Distance, F.D.Royal Bank of Canada, Local Share of layoffs
b Predictors: (Constant), MixZ_LS, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D. Schering, F.D. Deutsche Bank, Geographic Distance, F.D.Royal Bank of Canada, Local Share of layoffs, Geographic region effect
c Predictors: (Constant), MixZ_LS, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D. Schering, F.D. Deutsche Bank, Geographic Distance, F.D.Royal Bank of Canada, Local Share of layoffs, Geographic region effect, TARGET gdp growth

ANOVA (T's Q 2) average t+3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	120,364	8	15,046	103,250	,000(a)
	Residual	25,209	173	,146		
	Total	145,574	181			
2	Regression	122,831	9	13,648	103,214	,000(b)
	Residual	22,743	172	,132		
	Total	145,574	181			
3	Regression	123,428	10	12,343	95,305	,000(c)
	Residual	22,146	171	,130		
	Total	145,574	181			

a Predictors: (Constant), MixZ_LS, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D. Schering, F.D. Deutsche Bank, Geographic Distance, F.D.Royal Bank of Canada, Local Share of layoffs
b Predictors: (Constant), MixZ_LS, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D. Schering, F.D. Deutsche Bank, Geographic Distance, F.D.Royal Bank of Canada, Local Share of layoffs, Geographic region effect
c Predictors: (Constant), MixZ_LS, F.D. ATS Automation Tooling Systems Inc, F.D. Saputo Inc., F.D. Schering, F.D. Deutsche Bank, Geographic Distance, F.D.Royal Bank of Canada, Local Share of layoffs, Geographic region effect, TARGET gdp growth
d Dependent Variable: 2) T'S Q postL average 3

Coefficients (T's Q 2) average t+3)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,837	,040		20,706	,000		
	F.D. ATS Automation Tooling Systems Inc	6,936	,273	,809	25,421	,000	,990	1,011
	F.D.Royal Bank of Canada	-,589	,159	-,143	-3,706	,000	,675	1,482
	F.D. Deutsche Bank	-,645	,096	-,215	-6,712	,000	,974	1,026
	F.D. Schering	1,303	,282	,152	4,618	,000	,926	1,080
	F.D. Saputo Inc.	,949	,134	,230	7,109	,000	,956	1,047
	Local Share of layoffs	-,406	,177	-,099	-2,293	,023	,532	1,878
	Geographic Distance	$9{,}22E^{-06}$	,000	,034	,938	,349	,757	1,321
	MixZ_LS	,010	,027	,017	,358	,721	,421	2,377
2	(Constant)	,955	,047		20,226	,000		
	F.D. ATS Automation Tooling Systems Inc	6,816	,261	,795	26,076	,000	,978	1,022
	F.D.Royal Bank of Canada	-,680	,153	-,165	-4,450	,000	,662	1,511
	F.D. Deutsche Bank	-,499	,097	-,167	-5,120	,000	,858	1,166
	F.D. Schering	1,469	,271	,171	5,412	,000	,907	1,102
	F.D. Saputo Inc.	,832	,130	,202	6,400	,000	,914	1,094
	Local Share of layoffs	-,305	,170	-,075	-1,795	,074	,523	1,914
	Geographic Distance	$6{,}01E^{-06}$	,000	,022	,640	,523	,752	1,329
	MixZ_LS	-,001	,026	-,003	-,056	,955	,416	2,401
	Geographic region effect	-,268	,062	-,149	-4,319	,000	,760	1,316

3	(Constant)	,861	,064		13,431	,000		
	F.D. ATS Automation Tooling Systems Inc	6,828	,259	,796	26,387	,000	,978	1,023
	F.D.Royal Bank of Canada	-,659	,152	-,160	-4,350	,000	,659	1,517
	F.D. Deutsche Bank	-,526	,097	-,176	-5,406	,000	,844	1,185
	F.D. Schering	1,400	,271	,163	5,174	,000	,894	1,118
	F.D. Saputo Inc.	,817	,129	,198	6,335	,000	,911	1,097
	Local Share of layoffs	-,371	,171	-,091	-2,170	,031	,506	1,978
	Geographic Distance	$5{,}29E^{-06}$	,000	,020	,569	,570	,752	1,331
	MixZ_LS	-,004	,025	-,008	-,173	,863	,415	2,408
	Geographic region effect	-,230	,064	-,128	-3,601	,000	,702	1,425
	TARGET gdp growth	3,907	1,819	,070	2,148	,033	,835	1,198

a Dependent Variable: 2) T'S Q postL average 3

Appendix 5.10 Single country additional analysis

Appendix 5.10.1 INTRODUCTION

The purpose of this final appendix is to study the theoretical development of the thesis and its hypotheses with respect to the single countries investigated. As a matter of fact, the sample was originally developed so to include countries with different management styles and law systems with the aim of warranting the highest possible external validity of the findings. At the same time though, it is also interesting to consider each country separately and compare the results of each analysis in order to evaluate possible differences in the way layoffs are implemented across countries and how such decisions impact company performance. For this reason, the sample was split into two parts according to the country of origin of the multinationals.
The same procedures of analysis described in the methods chapter and applied in the original data analysis apply here too. Because of space concerns (this is already the tenth appendix) and to not overload the reader with not-strictly-necessary tables of data, only comparison tables will be shown next.

Appendix 5.10.2 DESCRIPTIVE STATISTICS

When considering only companies with headquarter in Canada, the first two hypotheses are tested with a sample composed by 116 observations, belonging to 14 multinational companies. For the reduced sample, necessary to test hypotheses three and four as explained in chapter five, the sample is constituted by 98 observations originating from 14 different organizations.

If we consider instead only the German companies of the original dataset, the first couple of hypotheses are tested over 89 observations belonging to 22 companies, whilst the final two hypotheses' dataset is composed by 84 observations selected from 19 multinationals.

Appendix 5.10.3 HYPOTHESIS 1

Hypothesis one seek to investigate where multinationals dismiss employees the most within the company network, that is, in the home country or abroad. Tables A.5.10.1, A.5.10.2 and A.5.10.3 compare the results obtained from the different datasets, grouping them according to the dependent variable investigated.

Table A.5.10.1 Results comparison for layoff size expressed in absolute values

Layoff as Absolute value	***Multi-country***		***Canada***		***Germany***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(intercept)	6.360	29.320***	4.727	20.337***	1.312	.957
Home/abroad layoff [*Indep. V.*]	- .452	-2.393*	.158	.747	-1.790	-6.205***
Geographic region effect	.525	2.309*				
Target GDP growth	- 20.252	-3.485**				
Target output gap	26.017	3.088**	21.636	2.271*		
Geographic dispersion			.017	3.045**		
Firm size (LN)					2.559	4.503***
Model R^2 (adj.)	.459 (.425)		.416 (.372)		.494 (.470)	
f-value	13.560 ***		9.517 ***		20.517 ***	

Table A.5.10.2 Results comparison for layoff size relative to Total company employees.

Layoff as Total share	***Multi-country***		***Canada***		***Germany***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(intercept)	- 4.125	-21.949***	- 5.008	29.568***	1.312	.957
Home/abroad layoff [*Indep. V.*]	- .475	-2.569*	.342	1.606	-1.598	-5.440***
Target output gap	16.966	2.194*				
Target GDP growth	-17.026	3.101**				
ROA					-1.735	-3.232**
Model R^2 (adj.)	.430 (.406)		.394 (.372)		.519 (.502)	
f-value	18.453 ***		18.043 ***		30.593 ***	

Table A.5.10.3 Results comparison for layoff size relative to Local share of employees.

Layoff as Local share	***Multi-country***		***Canada***		***Germany***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(intercept)	-3.797	-17.749***	- 3.428	-16.619***	- 3.109	-13.520***
Home/abroad layoff [*Indep. V.*]	0.607	3.326**	.402	1.638	.756	2.809**
Target GDP growth	14.520	2.602*				
Geographic region effect	.407	2.022*				
ROA					- 1.724	- 3.534**
Model R^2 (adj.)	.308 (.276)		.222 (.194)		.333 (.301)	
f-value	9.630 ***		7.904 ***		10.470 ***	

Firstly, it is possible to notice that for what concerns Canada, no significant values of the independent variable are found for any dimension of layoff size.

On contrary, if we consider the German dataset, the *home/abroad layoff* [independent] variable is consistently significant throughout the analysis. The signs of the variable however do not shed new light on the original results obtained with the full dataset, rather, they resemble them. As a matter of fact, absolute number and total share of layoffs reject the hypothesis showing a negative relation between

abroad layoffs and size, whilst, just like the original investigation, Local share support the claim put forward by the first hypothesis.

Considerations regarding control variables are limited. Only German observations found a relation between size of layoff and measures of performance, and such relation holds for all three dimensions of size. For Canadian observations instead, much of the variance in the absolute number of layoff size is captured by the *state of the economy* (in the target country) variable, but the variable, as well as any other control variable, is absent in the other two regressions.

Appendix 5.10.4 HYPOTHESIS 2

Hypothesis two expands the previous hypothesis researching the possible relationship existing between size of layoffs and the geographic distance (from the headquarter) at which they occurred.

As it was done in the original test, only relative measures of size are assessed in this test. Tables A.5.10.4 and A.5.10.5 compare the results.

Table A.5.10.4 Results comparison for layoff size relative to Total company employees

Layoff as Total share	***Multi-country***		***Canada***		***Germany***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard.β	t-value
(intercept)	-4.337	-26.141***	- 4.637	38.006***	- 4.280	-15.882***
Geographid Distance [*Indep. V.*]	- 4.56 E^{-5}	- 1.705*	- 6.4 E^{-05}	2.257*	- 1.21 E^{-07}	.002
Target GDP growth	- 14.926	- 2.712**			- 25.946	-2.556*
ROA					- 1.480	- 2.454*
Model R^2 (adj.)	.404 (.383)		.407 (.386)		.403 (.374)	
f-value	19.091 ***		19.058 ***		14.152 ***	

Table A.5.10.5 Results comparison for layoff size relative to Local share of employees

Layoff as Local share	***Multi-country***		***Canada***		***Germany***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(intercept)	-3.705	-18.408***	- 4.098	-15.290***	- 2.993	-13.140***
Geographid Distance [*Indep. V.*]	9.63 E^{-5}	3.632***	.00017	5.482***	- 1.9 E^{-05}	- .429
Geographic region effect	.491	2.456**				
Target GDP growth	13.649	2.448**			21.136	2.508**
ROA					- 1.866	- 3.763***
Model R^2 (adj.)	.317 (.285)		.373 (.350)		.322 (.281)	
f-value	10.036 ***		16.487 ***		7.891 ***	

Similarly to the first hypothesis, one of the two single-country datasets, in the specific case, Germany, did not find significant values for its independent variable in either test. Conversely, Canada and the multi-country dataset both find significant and contrasting result. When size of layoffs is measured in relation with the total company workforce the shorter the distance the largest the amount of people dismissed; in contrast with what stated by hypothesis number two. On the other hand, when pondering size by the number of people employed locally, hypothesis two is verified for both Canada and the multi-country dataset.
Control variables are absent from the Canadian companies' analyses, but absorb large part of the variance, especially the *state of the economy* target [country] GDP growth, when assessing German companies.

The first conclusion that is looming is that hypotheses one and two are consistent in their findings. Both hypotheses have been verified considering size as percentage of local employees, but, when assessing them in relation with the total workforce, neither of them found support. This may induce already some considerations, which however are deferred to the concluding chapter.

Appendix 5.10.5 HYPOTHESIS 3

Hypothesis three questions whether multinationals which lay off prevalently abroad enjoy of superior financial performance compared to other multinationals which instead lay off mainly in their home country. As it was done with the multi-country dataset, here too the hypothesis is tested assessing performance with different time focuses so to be able to compare all results originally obtained and thus limiting as much as possible any ambiguity of outcomes.

Consequently, performances are investigated considering:

- The average of the last three years of the sample. Long term (Last 3)
- The year following the layoff announcement. Short term (t+1)
- The average of the following three years after the layoff announcement. Mid term (M_{t+3})

The additional considerations on the dependent variables (size and frequency of layoffs) proposed in appendix 5.8 apply here as well as any other operationalization of variables thus far utilized.

Long term performance (last 3)

Canada shows significant and contrasting results in terms of market measures of performance and size of the layoffs. Considering the frequency at which layoffs occur instead, a positive and significant relation is witnessed for ROE, while negative and significant ones are found for both Tobin's Q measurements.

The German sample instead supports hypothesis three only when performance are measured with accounting indexes for both size and frequency of layoffs. In all the other cases the betas of the independent variables are non-significant.

Table A.5.10.6 Overview Canada (last 3)

Average last 3 years	**Dependent variable**	**Size of abroad layoff over total layoffs**			**Amount of abroad layoff over total layoffs (Frequency)**		
		Adj. R^2	***F-value***	***β independent***	***Adj. R^2***	***F- value***	***β independent***
ROE		.903	180.848***	.002	.918	217.535***	.136***
ROA		.760	62.560***	-.015	.761	62.853***	.027
1)Tobin's Q		.968	739.899***	-1.069***	.935	282.186***	-.700**
Target Output Gap							*-6.341**
2)Tobin's Q		.931	328.603***	.988***	.919	220.853***	-1.104***
Target Output Gap							*-9.109**

Table A.5.10.7 Overview Germany (last 3)

Average last 3 years	**Dependent variable**	**Size of abroad layoff over total layoffs**			**Amount of abroad layoff over total layoffs (Frequency)**		
		Adj. R^2	***F-value***	***β independent***	***Adj. R^2***	***F- value***	***β independent***
ROE		.866	49.743***	.052**	.853	44.791***	.037
Target Output Gap				- .828*			- .858*
ROA		.828	67.433***	.044***	.822	64.819***	.060***
1)Tobin's Q		.936	174.468***	-.018	.936	175.811***	.062
Home GDP growth				*5.881***			*5.546***
2)Tobin's Q		.867	109.589***	.120	.868	110.011***	.174

Table A.5.10.8 Overview Multi-country (last 3)

Average last 3 years	**Dependent variable**	**Size of abroad layoff over total layoffs**			**Amount of abroad layoff over total layoffs (Frequency)**		
		Adj. R^2	***F-value***	***B independent***	***Adj. R^2***	***F- value***	***β independent***
ROE		.885	156.147***	.017	.896	173.890***	.100***
Geographic region effect				*- .032***			*- .046****
ROA		.761	72.940***	- .002	.759	82.421***	.031
Geographic region effect				*.023**			*.022**
Target Output Gap				*- .845**			
1)Tobin's Q		.906	292.158***	- .356***	.903	280.647***	- .356**
2)Tobin's Q		.895	222.553***	- .193†	.897	226.340***	.364*

Overall, comparing results for the long term performance, not much is added by the splitting of the dataset. In terms of size of layoffs, German observations appear to support the hypothesis when considering accounting measures, but no other conclusions can be drawn because of non-significant

results. Canadian observations instead reject the hypothesis for market measures and layoff frequency, but again no other comment can be made.

Control variables have a marginal role in all long-term regression. Besides the firm dummy variables forced into the regressions at start as explained in the methods chapter, *target output gap* and *home GDP growth* enter the regressions with relatively modest betas (- 9.109 < Beta < 5.881).

Short term performance (t+1)

A positive and significant relation between accounting measures of performance and the two layoff operationalizations is present for both the Canadian and the German datasets. Canadian observations also carry a negative relation between layoff size and the two versions of the Tobin's Q, which instead are non significant for the German sample.

Table A.5.10.9 Overview Canada (t+1)

T+1	Dependent variable	Size of abroad layoff over total layoffs			Amount of abroad layoff over total layoffs (Frequency)		
		Adj. R^2	***F-value***	***β independent***	***Adj. R^2***	***F- value***	***β independent***
ROE		.388	21.470***	.252	.398	22.369***	.344*
Home Output Gap				*-34.539***			*-32.231***
ROA		.395	13.669***	.101*	.405	14.200***	.124**
Home Output Gap				*-11.397****			*-10.452****
1)Tobin's Q		.676	34.789***	-.580**	.647	30.587***	-.232
Home Output Gap				*27.722**			
Home GDP growth							*11.929**
2)Tobin's Q		.652	31.295***	-.373†	.640	29.732***	-.018
Home GDP growth				*14.811***			*16.906***

Table A.5.10.10 Overview Germany (t+1)

T+1	Dependent variable	Size of abroad layoff over total layoffs			Amount of abroad layoff over total layoffs (Frequency)		
		Adj. R^2	***F-value***	***β independent***	***Adj. R^2***	***F- value***	***β independent***
ROE		.942	676.709***	.170**	.938	627.160***	.103
ROA		.996	9342.807***	.023**	.996	6986.129***	.033**
Home Output Gap				*- .692***			*- .704***
1)Tobin's Q		.873	82.200***	-.066	.871	81.320***	.071
Home GDP growth				*5.679**			*4.904**
2)Tobin's Q		.791	45.760***	.003	.705	46.920***	.095
Home Output Gap				*- 4.008**			*- 4.313**

Table A.5.10.11 Overview Multi-country (t+1)

T+1	Dependent variable	Size of abroad layoff over total layoffs			Amount of abroad layoff over total layoffs (Frequency)		
		Adj. R^2	***F-value***	***β independent***	***Adj. R^2***	***F- value***	***β independent***
ROE		.631	78.430***	.187†	.634	79.508***	.251**
Home Output Gap				*- 9.420**			*- 8.190**
ROA		.807	152.372***	.045†	.810	155.199***	.068**
Home Output Gap				*- 3.330***			*- 3.031***
1)Tobin's Q		.659	50.987***	-.218*	.651	49,227***	.064
2)Tobin's Q		.654	43.690***	-.148	.651	43.146***	.038
Geographic region effect				*- .260**			*- .239**

With a short term focus, the outcomes of the analysis of the two single-country samples resemble what have already been stated regarding the full dataset: Accounting measures of performance have a positive and significant relation with size and frequency of layoffs irrespective of the country of origin. On the other end, market measures appear to reject hypothesis three for layoff size, but only considering Canadian observation. In all other cases, the betas are non-significant, and no conclusion can be put forward.

Regarding the Canadian dataset, *home output gap* and *home GDP growth* control variables cannibalize large part of the variance explained by the models per every dependent variable. As a matter of fact their absolute Beta values are never below 10, with peaks for ROE just above 30. Consistently, the two variables of the *state of the economy* in the home country are also present in the German sample regressions, but their influence on the models' explanatory power is minor.

Mid term performance (M_{t+3})

Positive and significant values of the accounting indexes for both single-country investigations prove support for hypothesis three. Once again however, the market measures of performance refuse the hypothesis because of negative and significant betas when assessed from the Canadian dataset. Finally, no conclusion can be drawn about market measures of German companies in light of the non-significance of outcomes of the relative independent variable.

Table A.5.10.12 Overview Canada (M_{t+3})

T+3 average	Dependent variable	Size of abroad layoff over total layoffs			Amount of abroad layoff over total layoffs (Frequency)		
		Adj. R^2	*F-value*	*β independent*	*Adj. R^2*	*F- value*	*β independent*
ROE		.641	35.631***	.241**	.654	46.798***	.317***
Target GDP growth				- 4.420*			
Home Output Gap				- 9.553*			
Home GDP growth							*- 6.911***
ROA		.497	20.133***	.042	.506	20.905***	.062*
Target GDP growth				*- 1.907***			*- 1.750***
1)Tobin's Q		.884	148.988***	-.421***	.869	130.239***	-.262*
Home Output Gap				*21.069***			*18.765***
2)Tobin's Q		.824	114.289***	-.612***	.798	96.507***	-.230
Home Output Gap				*16.477**			
Home GDP growth							*9.007**

Table A.5.10.13 Overview Germany (M_{t+3})

T+3 average	Dependent variable	Size of abroad layoff over total layoffs			Amount of abroad layoff over total layoffs (Frequency)		
		Adj. R^2	*F-value*	*β independent*	*Adj. R^2*	*F- value*	*β independent*
ROE		.932	287.230***	.064†	.935	298.865***	.120*
Home Output Gap				*- 3.812***			*- 3.887***
ROA		.970	882.220***	.035**	.970	907.900***	.051***
Home Output Gap				*- 1.097***			*- 1.114***
1)Tobin's Q		.886	93.561***	-.065	.886	93.452***	.088
Home GDP growth				*6.372**			*5.476**
2)Tobin's Q		.863	88.072***	.031	.864	89.189***	.078
Home Output Gap				*- 7.690****			*- 7.966****

Table A.5.10.14: Overview Multi-country (M_{t+3})

T+3 average	Dependent variable	Size of abroad layoff over total layoffs			Amount of abroad layoff over total layoffs (Frequency)		
		Adj. R^2	*F-value*	*β independent*	*Adj. R^2*	*F- value*	*β independent*
ROE		.724	95.972***	.190***	.726	121.135***	.250***
Home Output Gap				*- 5.013**			*- 4.249**
Target GDP growth				*- 2.190 **			
ROA		.777	90.837***	.048**	.785	95.351***	.072***
Home Output Gap				*- 2.120***			*- 1.849***
Target GDP growth				*- .871**			*- .821**
1)Tobin's Q		.839	157.934***	-.184*	.833	151.177***	-.065
2)Tobin's Q		.841	137.662***	-.236**	.833	129.657***	-.003
Geographic region effect				*- .303****			*- .280****

Not surprisingly, even for mid term performance, the single-country analysis does not integrate the original conclusions with new findings. As a matter of fact, here probably more than in the other analyses, the conclusions drawn from the multi-country dataset appear to be the sum of the statistically significant outcomes of the single-country assessments. That is, support for the hypothesis in terms of accounting measures, and partial denial of the hypothesis' claim when layoff are assessed with market measures and in relation with layoff size. Inclusive results are then obtained from the combination of market measures and layoff frequency.

Again, a combination of the *state of the economy* in the home country control variables are the prevalent control variables that appear in all the models obtained from the mid term perspective on company performance. Nonetheless, their coefficients are not as high as in the short term perspective, and only *home output gap* for the two market measures evaluated from the Canadian sample stand out because of higher betas (above 10). Finally *target GDP growth* also enters in the accounting measures' models of the Canadian dataset.

Appendix 5.10.6 HYPOTHESIS 4

The purpose of hypothesis four is to unveil how geographic distance affects the relation between corporate financial performance and layoffs. Specifically, it is postulated that distance moderates the positive influence that layoffs have on company performance. To analyze the results obtained from the single-country assessment and compare them to the multi-country analysis, each performance measure is evaluated singularly.

ROE post-layoff average three years (M_{t+3})

As can be seen from tables A.5.10.15, A.5.10.16 and A.5.10.17, the interaction term coefficients for both Canada and Germany are non-significant, just like the multi-country dataset. As a result, at least from the Return on Equity perspective, no proper conclusions can be drawn.

Control variables instead assume a certain valence in light of the limited coefficients' values of the other independent variables, especially for the Canadian sample.

Table A.5.10.15 Overview Canada (ROE)

t+3 av.	Layoff as	*Absolute number*		*Total share*		*Local share*	
		Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)		.203	2.136*	.129	1.951†	.163	2.741**
Control variables							
Target GDP growth		-7.287	-4.086***	-6.910	-3.948***	-7.639	-4.069***
Main effect							
Size		-8.3E^{-05}	-1.140	1.314	-.815	.067	.296
Geo. Distance		1.68E^{-05}	.704	2.41E^{-05}	2.750**	1.90E^{-05}	2.015*
Standardized interaction term		-.078	- .286	-.008	-.182	.010	.409
Model R^2 (adj.)		.654 (.631)		.652 (.629)		.652 (.630)	
f-value		28.649 ***		28.393***		28.473***	

Table A.5.10.16 Overview Germany (ROE)

Layoffs as	*Absolute number*		*Total share*		*Local share*	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	.065	3.336**	.067	3.545***	.068	3.702***
Control variables						
Home output gap	-3.862	-3.228**	-3.949	-3.264**	- 3.792	- 3.149**
Main effect						
Size	2.63E^{-06}	.807	.318	.592	.058	.679
Geo. Distance	6.69E^{-06}	1.562	6.21E^{-06}	1.484	5.60E^{-06}	1.329
Standardized interaction term	- .005	- .557	.002	.187	- .014	- .829
Model R^2 (adj.)	.936 (.931)		.935 (.930)		.936 (.931)	
f-value	186.403 ***		185.616***		187.045***	

Table A.5.10.17 Overview Multi-country (ROE)

Layoffs as	*Absolute number*		*Total share*		*Local share*	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	.099	- 2.860*	.095	2.621**	.089	2.778*
Control variables						
Target GDP growth	- 3.522	- 3.115**	-3.395	-3.071**	-3.500	-3.090*
Main effect						
Size	- 3.46E^{-06}	-.548	-.189	-.218	.111	- .848
Geo. Distance	1.88E^{-05}	3.581***	1.85E^{-05}	3.466*	1.75E^{-05}	3.035*
Standardized interaction term	- .001	- .032	- .002	- .095	- .011	- .724
Model R^2 (adj.)	.720 (.710)		.719 (.710)		.720 (.711)	
f-value	74.996 ***		74.752***		75.181***	

ROA post-layoff average three years (M_{t+3})

Tables A.5.10.18 and A.5.10.19 show that the interaction terms object of investigation present negative values for all three dimensions of size, with the exception of Local share of layoffs for the Canadian dataset, which conversely proves a positive influence of distance on the layoffs-performance

relationship. These outcomes, in theory, would support hypothesis four, but actually, only Total share of layoff regressed from the Canadian sample is also significant.

Significant Control variables in the models are the same as the ROE investigation, that is *Target GDP growth* for the Canadian sample and *Home output gap* for the German one, however their coefficients are smaller.

Table A.5.10.18 Overview Canada (ROA)

Layoffs as	***Absolute number***		***Total share***		***Local share***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	.067	1.873†	.078	2.785**	.044	2.018*
Control variables						
Target GDP growth	- 2.338	- 3.569**	-6.910	-3.948***	-2.259	-3.281**
Main effect						
Size	$-2.3E^{-05}$	-.847	-1.161	-1.359	.009	.097
Geo. Distance	$4.18E^{-07}$	.045	$1.3E^{-06}$	.316	$5.38E^{-06}$	1.550
Standardized interaction term	- .063	- .600	- .055	- 2.293**	.001	.111
Model R^2 (adj.)	.537 (.501)		.558 (.524)		.532 (.496)	
f-value	14.897 ***		16.229***		14.635***	

Table A.5.10.19 Overview Germany (ROA)

Layoffs as	***Absolute number***		***Total share***		***Local share***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	.011	2.142*	.013	2.642**	.013	2.569*
Control variables						
Home output gap	- 1.066	- 3.336**	- 1.052	-3.254**	- 1.074	- 3.319**
Main effect						
Size	$4.67E^{-07}$	.534	- .056	- .390	.003	.151
Geo. Distance	$4.67E^{-06}$	4.106***	$4.41E^{-06}$	3.952***	$4.36E^{-06}$	3.873***
Standardized interaction term	- .003	- 1.051	- .002	- .699	- .003	- .593
Model R^2 (adj.)	.972 (.970)		.972 (.970)		.972 (.970)	
f-value	543.012 ***		539.121***		537.638***	

Table A.5.10.20 Overview Multi-country (ROA)

Layoffs as	***Absolute number***		***Total share***		***Local share***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	.027	- 2.368*	.030	2.527*	.006	.472
Control variables						
TARGET gdp growth	- 1.164	- 3.214*	- 1.208	- 3.399*		
HOME Output gap	- 1.783	-2.852***	- 1.710	- 2.744**	- 3.954	- 3.698**
Main effect						
Size	$-4.96E^{-07}$	0.247	- .188	- .640**	- .330	-5.528***
Geo. Distance	$5.96E^{-06}$	3.515*	$5.44E^{-06}$	3.119**	$1.19E^{-05}$	3.712***
Standardized interaction term	- .00039	- .067	- .007	- 1.087	.024	3.063*
Model R^2 (adj.)	.788 (.777)		.789 (.778)		.329 (.306)	
f-value	70.953 ***		71.570 ***		14.323***	

Tobin's Q 1 post-layoff average three years (M_{t+3})

The first operationalization of the Tobin's Q measure yields only one significant value, that is Total share of layoffs for Canadian observations. Still, the result support hypothesis four demonstrating the moderating effect that distance has on the layoff-performance relationship. Nevertheless, the other two dimension of size are positive, but non-significant. The German sample's analysis then confirms the moderating effect of distance, but in turn the results are non-significant once again.

Large part of the Total share model's variance for Canada is explained by its control variable (*home output gap*). The other models also have *state of the economy* variables with significant values but their coefficients are not as high.

Table A.5.10.21 Overview Canada (Tobin's Q 1)

Layoffs as	***Absolute number***		***Total share***		***Local share***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	1.308	8.874***	1.607	22.233***	1.422	12.632***
Control variables HOME gdp growth HOME output gap	8.906	2.851**	 19.355	 2.938**	8.941	2.767**
Main effect Size Geo. Distance	 4.81E^{-05} 1.18E^{-05}	 .449 .334	 .950 - 2.8E^{-05}	 .387 - 2.168*	 - .543 - 4.1E^{-06}	 - 1.526 - .299
Standardized interaction term	.364	.899	- .146	- 2.367*	.020	.482
Model R^2 (adj.)	.874 (.864)		.881 (.872)		.878 (.868)	
f-value	89.236 ***		95.179***		92.407***	

Table A.5.10.22 Overview Germany (Tobin's Q 1)

Layoffs as	***Absolute number***		***Total share***		***Local share***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	1.449	44.737***	1.385	39.312***	1.426	53.564***
Control variables HOME gdp growth TARGET gdp growth	6.819	2.689**	 2.966	 2.703**		
Main effect Size Geo. Distance	 - 7.7E^{-06} - 4.2E^{-06}	 - 1.945† - .741	 1.610 - 7.8E^{-06}	 2.614* -1.360	 .300 - 7.0E^{-06}	 3.931*** - 1.295
Standardized interaction term	- .005	- .457	- .006	- .429	- .027	- 1.350
Model R^2 (adj.)	.905 (.893)		.903 (.891)		.907 (.897)	
f-value	73.013 ***		76.188***		90.918***	

Table A.5.10.23 Overview Multi-country (Tobin's Q 1)

Layoffs as	*Absolute number*		*Total share*		*Local share*	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	1.621	45.252***	1.530	28.258***	1.532	32.041***
Control variables TARGET gdp growth			3.165	1.989*	3.829	2.368*
Main effect						
Size	- 1.54E^{-06}	- 1.735†	.336	.290	- .146	- .931
Geo. Distance	- 8.06E^{-06}	- 1.008	- 1.12E^{-05}	- 1.376	-5.88E^{-06}	-.689***
Standardized interaction term	.015	.568	- .020	- .704	- .014	- .587
Model R^2 (adj.)	.842 (.835)		.844 (.835)		.845 (.837)	
f-value	115.369 ***		103.068 ***		104.480***	

Tobin's Q 2 post-layoff average three years (M_{t+3})

Consistently with the first measurement of the Tobin's Q, here again only Total share of layoff regressed from the Canadian sample yield significant and negative results for the *size*distance* interaction term, thus supporting the hypothesis.

All the other results, comprised the multi-country dataset ones, are non-significant, reducing at minimum any possible explanatory value bounded in their coefficient sign.

Control variables then are also consistent throughout the analyses, with *home GDP growth* steadily around 10 for the Canadian sample and *home output gap* around 7 for the German one.

Table A.5.10.25 Overview Canada (Tobin's Q 2)

Layoffs as	*Absolute number*		*Total share*		*Local share*	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	.711	3.807***	.788	5.378***	.762	5.280***
Control variables HOME gdp growth	10.810	2.697**	9.495	2.385*	10.896	2.551*
Main effect						
Size	2.3E^{-05}	1.700†	2.053	.651	-.496	-1.075
Geo. Distance	2.85E^{-05}	.632	-3.9E^{-05}	- 2.380*	-7.1E^{-06}	-.394
Standardized interaction term	.606	1.169	- .193	- 2.415*	.008	.153
Model R^2 (adj.)	.816 (.804)		.821 (.809)		.811 (.799)	
f-value	67.306 ***		78.206***		65.142***	

Table A.5.10.26 Overview Germany (Tobin's Q 2)

Layoffs as	***Absolute number***		***Total share***		***Local share***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	.532	19.700***	.571	19.234***	.579	20.779***
Control variables HOME output gap	- 7.725	- 5.476***	- 7.440	- 4.913***	- 6.892	- 4.529***
Main effect Size Geo. Distance	$8.78E^{-06}$ $4.96E^{-06}$	2.202* .872	- .365 $2.63E^{-06}$	- .577 .461	- .100 $3.91E^{-06}$	- 1.194 .694
Standardized interaction term	- .018	- 1.537	.004	.295	- .013	- .641
Model R^2 (adj.)	.881 (.868)		.874 (.860)		.876 (.863)	
f-value	69.124 ***		64.740***		66.458***	

Table A.5.10.27 Overview Multi-country (Tobin's Q 2)

Layoffs as	***Absolute number***		***Total share***		***Local share***	
	Unstandard. β	t-value	Unstandard. β	t-value	Unstandard. β	t-value
(constant)	.940	19.924***	.953	18.697***	.861	13.431***
Control variables Geo region effect Target gdp growth	- .282	- 4.303***	- .281	-4.528***	- .230 3.907	-3.601*** 2.148*
Main effect Size Geo. distance	$5.84E^{-07}$ $- 1.73E^{-06}$	$.002^{\dagger}$ - .195	- .688 $- 3.91E^{-06}$	- .551 - .440	- .371 $5.29E^{-06}$	- 2.170* .569
Standardized interaction term	- .007	- .245	- .047	- 1.530	- .004	- .173
Model R^2 (adj.)	.839 (.831)		.841 (.833)		.848 (.839)	
f-value	99.758 ***		101.378***		95.305***	

Appendix 6.7 SUMMARY

Going through this all additional analysis, no major clarification or twisting of results has been found. Such outcome was, to a certain extent, expected given that the multi-country sample is nothing but the sum of the two single-country datasets. Probably, if more countries were to be included in the sample, more insights could have been found, but the matter will be reserved for the limitations paragraph of the final chapter.

Furthermore, one of the original goals for the division of the dataset was to compare the approaches that Canadian and German companies may have toward layoffs' polices and their impact on firm performance. Yet, such comparison succeeded only marginally since I was not always able to obtain, and then match, significant results for both countries. Rather, most of the times the two dataset yielded results which were complementary; typically, if the Canadian sample's outcomes were non-significant for a certain parameter, but were significant for the other, the opposite would have occurred for German observations.

Consequently it was very difficult to draw conclusions on the differences elapsing between the two countries in terms of managerial approach and effects of layoffs on performance.

Nevertheless the additional analysis is not to be considered of limited use; rather, valuable hints and conclusion have been found. Additional support for the findings of hypotheses one and two derive, respectively, from the outcomes of the German dataset and from the Canadian one. Furthermore hypothesis three appear to demonstrate that the two countries are not different in terms of company performance response to layoff implementation strategies while instead the performance of the two groups are differently affected by the distance at which layoffs occur in terms of performance (hypothesis four). Some of the results and implication deriving from this additional analysis will find theoretical justification in the conclusive chapter.

For all tables from A.5.10.1 to A.5.10.27 : ***=0,001 significance(2-tailed**)**; **=0,01 significance(2-tailed**)**; *=0,05 significance(2-tailed**)**; †=0,1 significance (2-tailed**) ,**

Except tables A.5.10.4 and A.5.10.5 which applies : ***=0,001 significance(1-tailed**)**; **=0,01 significance(1-tailed**)**; *=0,05 significance (1-tailed**)**; †=0,1 significance (1-tailed**)**