

**Labour Regulation and Jurisdictional Competiveness, Investment, and Business
Formation:
A Review of the Mechanisms and Evidence**

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Executive Summary

This paper summarizes and assesses the relevant research literature examining the link between labour and employment regulation and competitiveness, investment, and business formation, as well as how governments may compete for that investment and the associated jobs and whether this may lead to a harmonization of labour regulations and whether that harmonization will be to the lowest common denominator (i.e., a “race to the bottom.”)

Three major streams of research literature around the research questions are reviewed. First, is a number of reports and studies that are aimed primarily at a business readership. They document labour and other costs in a given jurisdiction that potential investors and businesses would consider in their decision to invest in a particular location. A related stream of studies based in academic research is also examined that considers the location decision using large datasets. Where should a firm (or an investor) locate its investment given various characteristics of each location? Another stream puts the focus on investment flows across jurisdictions. The largest number of studies in this stream focus on investment flows across national boundaries, the so-called, foreign direct investment or FDI. A sub-set of these studies examine investment flows within national boundaries but such studies are few in number. Lastly, is a group of studies that examine the direct effect of rising labour regulation and labour costs on inward investment flows.

My review shows that labour policy variables are measured in a variety of ways by different studies. Many studies focus on the direct costs of labour made up of wages, benefits, hours worked or not, etc. Other studies focus on an adequate supply of labour, i.e., availability of a skilled pool of labour and the quality of those workers. Yet another set of studies measures the extent of labour regulation in many of its aspects such as worker representation, various insurance programs that cover workplace injury, unemployment, active labour market policies, etc.

There is a general consensus in the literature that all else being equal, higher costs of labour discourage new investments. However, this finding by itself does not inform policymaking

adequately in terms of policy choices for the future. If an economy were unchanging over time to the extent that its goods and services were frozen in time in terms of quality and quantity, then it is possible that less labour regulation would always lead to more investments. But, a static, unchanging economy could translate into a stagnant or even declining standard of living, even as needs change over time and competition catches up.

Several other studies find that labour regulation plays a significant role in ensuring an orderly and productive investment in human capital. Firms and industries that produce innovative new products and services are attracted to jurisdictions that ensure a skilled and trained workforce. Such efficiency effects of labour regulation have been documented by a number of studies. These theories and empirical findings suggest that while labour costs may be an important determinant of investment flows, equally important are labour regulations that affect an adequate supply of skills needed by firms.

Labour regulation can be designed to attract investments. To consider this option, it is necessary to identify long-term policy priorities. If new labour regulations come into effect in step with enhanced investment in skills, then the changes will attract new investment interested in producing innovative new goods and services. On the other hand, greater labour regulation without commensurate investments in skills and increases in productivity are likely to discourage further investments.

To summarize, this review has found the following important considerations for policymakers considering the state of labour regulations in Ontario:

1. There is no wide-spread evidence of a race-to-the-bottom in labour regulations across the globe or within developed or developing countries.
2. There is evidence that investors seek jurisdictions where their capital can be productive. So, they avoid over-regulation but are willing to accept reasonable levels of regulations if other (i.e., non-labour) factors are attractive.

3. There is room to regulate further in select areas. We do not appear to have hit the ceiling on labour regulations. However, more regulations in some areas should be considered alongside possibly less regulation in other areas.
4. Any increase in the level of regulation should be considered within the context of the level of regulation in countries with whom we trade and compete. If Canadian regulations fall within the range of regulations prevalent in these countries, it is unlikely that investments would flow away from Canada on account of labour regulations.
5. Labour regulations, appropriately designed, can be a significant policy tool to aid Ontario's social and economic development.

Background

Provinces and countries are said to be under pressure to compete for business investment, plant locations and the associated jobs. This is said to reflect the fact that businesses and especially multinationals, can relocate their operations or parts of their operations, into other jurisdictions that have less costly regulatory initiatives. This is facilitated by free trade arrangements that enable them to move to where labour and regulatory costs are low and export back into countries with higher labour and regulatory costs. Both physical and financial capital are increasingly mobile, facilitated by advanced communication and transportation networks. It is important to emphasise that while most incumbent firms may not respond to labour regulations, *at the margin* the regulations may affect their *new investment* and plant location decisions as well as that of *new entrants*. As well, it is the *threat* of investing or locating plants elsewhere that matters, and such threats are more credible in a world of increased capital mobility. However, factors related to transportation costs, the availability of skilled workers, the attractiveness of the society to skilled workers, differences in taxation, exchange rates and numerous other factors also play a role in some decisions. Furthermore, these pressures are not necessarily permanent or irreversible as labour costs rise in the developing countries and as “re-shoring” may occur in some sectors like manufacturing.

These concerns can be articulated in terms of three key research questions:

1. To what extent is there evidence that differences in employment standards (“ES”) and labour relations (“LR”) regimes actually influence investment decisions by employers to invest in one jurisdiction as opposed to another?
2. To what extent is there evidence that differences in employment standards or labour relations regimes actually influence job creation by small business within a jurisdiction by making business less competitive than products or services available from other jurisdictions?
3. What degree of latitude or practical flexibility do political jurisdictions have in terms of how they respond to such costs (if the costs do exist)? What is the evidence in this area – does it lead to a “race to the bottom”?

The goal of this paper is to summarize and assess the relevant research literature examining the link between labour and employment regulation and competitiveness, investment, and business formation, as well as how governments respond to such investment decisions or the threat of relocating such investment. My goal is to focus this assessment around policy concerns and to identify policy implications of the research evidence.

1. Key Issues

The three key questions posed above are rooted in complex systems and it is almost impossible to address all the facets with a single study. The research literature does not address these questions directly by a single study. Rather, a number of studies address the sub-themes within the larger question through a number of overlapping studies across regions, industries and time-periods. Here I try to identify some of the sub-themes that are embedded in the three key questions.

Our research questions can be explored using a narrative that occurs frequently in the literature. It is presented here as a hypothetical simply to elucidate the themes that form part of the larger issues. In one version of this narrative, labour regulations and policies and practices for managing human resources increase the cost of labour in the production process. Thus, wages, benefits, rules governing work allocation, rules regarding representation and other such workplace regulations increase the overall cost of labour. Rules are important determinants of labour costs, be they embedded in laws or collective agreements or in custom and practice. Labour costs are an important consideration for businesses to decide where to invest. So, if labour costs are higher in one jurisdiction compared to another, all else being equal, the prudent (and rational) investor would choose the former jurisdiction, i.e., the one with the lower labour cost. In practice, investors consider labour costs along with other important costs and opportunities. So, for example, opportunities such as the availability of inputs (raw materials, capital, labour), infrastructure (transportation, tax incentives, tariff barriers, etc.) and proximity to markets are also important and they may trump labour cost considerations. This leads to the question of the relative importance of labour costs to the investment decision (Question 1 below). Further, if investors were to “shop around” for lower labour cost jurisdictions, then policymakers could “compete” with each other by lowering their labour costs. This competition could lead to a “race to the bottom” where successive rounds of policy reforms would lead to decreased labour regulation across all jurisdictions (Question 2 below).

In practice, labour costs as with other costs, have to be weighed against potential benefits. If potential benefits outweigh the costs then a high labour cost jurisdiction can be still an attractive destination for business investment for the rational investor. In this regard, one branch of the research literature has dwelt on the productivity effects of labour regulation and labour practices (Question 3 below). In this view, labour regulations allow for an orderly conduct of the labour market by encouraging investment in human resources, facilitating mobility and allowing for accumulation of savings that provide for retirement or other contingencies such as illness, injury or caregiving. This literature is quite vast when one considers the studies that focus on labour regulation in aggregate as well as on each of the specific areas of policy and practice such as wages, pensions, health & safety, workers' compensation, etc. Admittedly, some of these policies such as pension plans are not the direct result of regulations under the current review but since they result from activities such as collective bargaining which is a regulated activity under labour relations legislation, it can be justifiably included in our discussion of the effects of labour regulation. Some studies have focused on the ability of higher cost labour (including the higher cost of labour regulations) to generate higher returns by offsetting the effects of high labour costs with higher quality and/or higher value-added products and services. (Question 4 below). Some researchers have argued that there can be direct returns on higher labour costs in terms of lower turnover, greater employee engagement and greater personal productivity.

Another part of the narrative about rising labour standards is best captured by the process by which standards of living rose in many countries in the latter half of the 20th century. Earlier histories of Europe and North America and later development of selected Asian economies suggest that rising levels of labour regulation (and labour costs) are an essential component of the dynamic process of economic and social development. In this narrative, a higher level of labour regulation does increase costs but these costs can be viewed as investments that provide solid returns within an economy that is productive and innovative. Higher labour costs are offset not only by greater efficiency in production but also by being passed on to the consumers who are receiving a rising income (Question 5 below). There would be some products whose higher labour costs cannot be absorbed within the national economy. Such

work would go elsewhere within the global economy and one can trade with other jurisdictions within a free trade framework.

Given what we know about the dynamic of increasing regulation and higher labour costs and their effect on new investments and the economy at large, what should be the policy response? When and how should policy intervene? (Question 6 below). Are there “smart” ways to regulate that can achieve both efficiency and equity at the same time? The corollary would be that there are poor regulations that can slow down growth and set-back the cause of workers (Question 7 below). These are the regulations one should try to avoid.

Accordingly, the following questions frame the scope of this paper within the broader context of the three main questions.

1. To what extent are ES and LR laws key factors in such investment and plant location decisions, relative to other factors that affect those decisions such as access to markets or a skilled labour pool?
2. Does the importance of the regulatory component of labour costs in the investment decision lead to a “race to the bottom”? What is the evidence?
3. To what extent do ES and LR laws impose costs or have an effect on productivity?
4. Are there possible offsetting benefits that can offset at least some of the costs?
5. Are some of the costs shifted forward to customers or backward to workers?
6. What degree of latitude or practical flexibility do political jurisdictions have in terms of how they respond to such costs (if the costs do exist)?
7. What does the evidence say about the extent to which interjurisdictional competition for investment and the jobs associated with that investment fosters a race to the bottom?.
8. Are there “smart laws” that can achieve the regulatory objectives in a cost-effective fashion?

2. Theoretical Concepts in Assessing the Impact of ES & ER

The research literature around the three key questions can be found in several places depending on how the question is investigated. In this paper, I review various streams of published literature to find answers to policy concerns. They can be conceptually organized around ways in which they measure labour regulation and the different ways of measuring outcomes in terms of investment flows. Below, I describe each of these categories of empirical studies.

Measuring Labour Regulation

Empirical studies of the effect of labour regulations on investments measure regulations in a variety of ways. The most directly pertinent to our purposes are those that measure regulations directly. One method is to create a binary variable (0 or 1) to simply indicate the presence or absence of a given regulation. This technique can be applied to a single regulation (e.g., employer ability to fire a worker without cause) to create a single “dummy” variable or a number of regulations can be coded similarly (0 or 1) to create a number of variables, say, to capture the presence or absence of certain provisions in labour relations, collective bargaining, workers’ compensation, etc. A number of such variables can be combined also to create an index. A good example of this is the index of employment protection laws (EPL) created by the OECD (2004).

Another method is to measure regulation in terms of costs resulting directly from a certain regulation. An example would be, say, a training levy imposed by law that can be measured directly and precisely.

A number of other studies use total labour costs when they examine investment flows. The total labour costs include wages, benefits and other indirect costs of labour in addition to the costs attributable to regulations. Results of these studies are less applicable to our concerns regarding the effect of regulations on investment flows. Still, such studies are included here because they do capture the cost of regulations. These studies are numerous mostly because measurement of total labour costs is accomplished more easily than parsing out the component attributable directly to regulations.

Lastly, another group of studies is largely polemical and qualitative in nature arguing the effects of higher labour regulation based on observation of trends and the behaviour of investors, institutions, governments and other actors.

Measuring Outcome Variables

First, there are a number of reports and studies aimed primarily at a business readership that document labour and other costs in a given jurisdiction that potential investors and businesses would consider in their decision to invest in a particular location. A related stream of studies based in academic research also examines the location decision using large datasets. Where should a firm (or an investor) locate its investment given a multiplicity of factors? What factors should be taken into account and what is the relative importance given to each factor?

Yet another stream puts the focus on investment flows across jurisdictions. The largest number of studies in this stream focuses on investment flows across national boundaries, the so-called, foreign direct investment or FDI. A sub-set of these studies examines investment flows within national boundaries but such studies are few in number.

It is important to point out here that multiple perspectives can be found in the published literature on how best to answer the policy concerns of our key research questions. There is no single methodology or research study that can effectively answer these questions. Rather, one needs to examine these questions from different perspectives and after a full assessment of the evidence available, to summarize the evidence in a way that can be helpful for policymaking.

Accordingly, the last section of this paper pulls together the various sections of the paper and provides some considerations and directions for future policy.

This review also assumes that the relationship between labour regulation and investment flows should consider the level of development in a given jurisdiction before making comparisons with other jurisdictions. Comparing North America, for example, with Western Europe has certain advantages for the purpose of drawing some lessons for policy. Comparing North America with, say, Brazil or China, can confound the issue of regulation with the state of the economy and

other macro factors such as the legal system or political instability. Although comparisons across developed and developing countries can be useful for other purposes, it is better for our purposes in this paper to pay attention primarily to comparing Canada (and Ontario) with other developed countries and jurisdictions.

4. Labour Costs and the Investment/Location Decision

A number of consulting firms issue reports on costs across jurisdictions. Two of the better-known ones are singled out here for mention. KPMG, a consultancy, has been publishing an annual assessment of costs considered by firms in making their location decisions. The 2014 report covers major urban locations in ten OECD countries: Australia, Canada, France, Germany, Italy, Japan, Mexico, Netherlands, U.K. and the U.S. Given that all the ten countries are OECD members, their wages are high by global standards. Only Mexico, a middle-income country in World Bank parlance, can be considered an emerging economy. The metric used includes the following costs: labour, leasing of physical space, transportation, utilities, interest/depreciation and taxes. The key highlights of the report are:

1. Labour costs are the single largest component of total costs generally considered by firms in making location decisions.
2. Total costs are the highest in Germany and lowest in Mexico. Total cost in Canada is the second lowest next only to Mexico.
3. Labour costs in Canada are the third lowest next only to Mexico and the U.K.

In this report, labour costs include wages, benefits, any mandatory payroll-based contributions to social security, etc. Costs of labour regulation are not shown separately and hence one has to assume that costs resulting from specific regulations are all captured within the measure of ‘total labour cost’.

Another popular report published online in the form of a database is the Doing Business series published by the World Bank on an annual basis (World Bank 2015). In addition to measuring variables such as costs, number of days it takes to register a new business, tax rates, etc., this publication also provides results from a survey of business people of their assessment of

subjective factors such as the level of corruption and “red tape” (bureaucratic delays) in doing business across 189 countries of all sizes and at all levels of development. Data on employment regulations and practice cover three main areas: hiring, working hours and redundancy. In each case, they measure the “ease” of carrying out those activities which can be captured by the time it takes as well as the costs of each activity.

Both of these reports have clearly found a niche in the information landscape for making business decisions. Perhaps this can be attributed to the fact that they provide some reliable and reasonably accurate information on costs and other subjective factors that are often not available to businesses that are not already operating in the country.

However, neither of these two reports provides a complete picture for the investor. Some important gaps in their information can be identified. First, they do not provide any validation of their measures and factors cited. In other words, the evidence on how these factors affect actual investment flows or business decisions to locate is sorely missing from the reports. Second, these reports do not measure what can be considered to be the offsetting factors of, say, high labour costs. Studies of investment flows show that much investment flows into some very high labour cost regions in the world and to the extent that these reports do not catalogue the offsetting factors of high costs, they provide only one set of factors of importance in the investment or location decision. Lastly, given our focus on labour regulation and labour policies in its totality, most such reports focus only on a very small subset of measures such as wages, benefits and unit labour costs. The Doing Business series does map labour regulations in areas such as the ease of hiring workers, flexibility in scheduling hours and the costs of redundancy or layoffs. However, the report itself does not link these measures to investment flows. Given these limitations, I do not pursue them here in any greater detail.

4. Studies of the Location/Investment Decision

A large number of empirical studies in the academic literature have focused on the so-called location decision, i.e., what is the best location for a business given a variety of considerations? Most of these studies include labour costs but not always measures of labour regulations. Most of

them employ a multivariate econometric methodology in which labour costs are included along with a variety of other costs. A related set of studies put the focus on investment flows. Most of these studies track foreign direct investment (FDI), not investment flows within the country. The factors that attract FDI can be argued to be the same in attracting domestic capital as well. So, it is entirely appropriate to generalize based on studies that track FDI only.

My review here is selective of necessity given the large number in the literature. Previous studies have identified the following sets of factors that are considered before making a location decision: product markets, both proximity to and the size of a given market; input costs such as labour, raw materials, energy and physical space; taxes and incentives provided by the authorities; cost and availability of services that depend on the infrastructure; and industry concentration in the given location (for a review, see Farahani and Hekmatfar 2009).

Findings of these studies can be summarized along two distinguishing features of interest to us. First, whether the study measures only direct labour costs in terms of wages and benefits or if it includes broader measures of labour regulation. Second, if it includes measures of labour supply such as the availability of skilled labour. A different picture emerges depending on the way labour variables are measured in the study.

There is a general consensus in the literature that all else being equal, higher cost of labour (including the costs attributable directly to regulations), discourages investment. For example, a recent study by Calcagnini, Ferrando & Giombini (2014) investigated the impact of the interaction between product, labour and financial market variables on firms' investment by using panel data from European firms during 1994–2008. Its findings show that both financial and labour market regulations negatively affect firm investment by lowering firm profitability. However, they report an interaction between financial and labour regulations. Where finance was more easily available to firms they showed less sensitivity to labour regulations. A follow-up study by the same authors covering a longer period, 1988–2008, confirmed earlier findings and demonstrated that the negative effect of regulations (both labour and financial) on investments occurs due to lower firm profitability (Calcagnini, Ferrando & Giombini 2015).

A report by the Institute for Competitiveness and Prosperity (2015) reviewed over seventy studies and came to the same conclusion that the effect of total labour costs is negative on the decision to invest in a given jurisdiction. Unfortunately, the report does not provide details of the seventy studies and hence, it is hard to say what countries and time periods were covered by these studies.

Coughlin, Terza & Arromdee (1991) in their analyses of the location decision of foreign firms investing in manufacturing in the U.S. found that states with higher per capita incomes and higher densities of manufacturing activity attracted relatively more foreign direct investment. As expected, higher average wages had a negative association with foreign direct investment, higher unemployment rates had a positive association with it. Contrary to expectations, higher unionization rates were associated with higher levels of FDI and right-to-work states attracted less not more FDI. These results suggest that the relationship between labour regulations and investment flows is more complex than one of a simple negative correlation between the two.

Other research studies as well as observed flows of investments suggest a more complex nexus between labour regulation and investment flows. For example, Husan (1996) investigated the low levels of inward FDI into Poland's automobile sector despite its attraction as a low wage country, in the years following the fall of the communist regime. The study found that several factors discouraged FDI flows. Among others, it found that low labour productivity and a low share of labour costs (14 per cent of the total cost implying that savings on labour would not have a substantial impact on the cost of the final product) neutralized any advantage that low wages could provide. Moreover, Poland was not competitive at the time in other costs such as: transportation, costs of imports, new technology and the need to produce cars in relatively smaller numbers. This study well illustrates the pitfalls of drawing a simplistic connection between labour costs and investment flows.

Some studies do extend their measurement of the labour variable to include outcomes other than labour costs. Glickman & Woodward (1988) in their study of FDI flows into the U.S., created a variable which they called the "labor climate", a combination of unionization rate, number of hours lost due to strikes and average weekly earnings. Results from regression analysis showed

that the location of foreign investments was negatively related to labour climate. Investment inflows were also negatively related to energy costs but positively to infrastructure including transportation.

Radulescu & Robson (2013) examine investment flows to 19 Organization for Economic Co-operation and Development (OECD) economies using a measure of labour flexibility derived from a survey of business executives. It is part of the annual World Competitiveness Report (WCR) that ranks countries on a number of dimensions that constitute competitiveness. The survey asks respondents to rate countries on their labour regulations such as hiring and firing practices, minimum wages, etc. The idea is to develop a measure of whether labour practices are flexible enough or too restrictive. Their findings suggest that labour regimes perceived as being more flexible are positively correlated with inward investment flows. Although the measure of labour practices used in this study is subjective and it is hard to say if the hypothesized relationship is causal, it does suggest that there is a positive association between perceptions of labour flexibility and investment flows. Another study by Frank (2008) found that for creative industries such as the film industry where work tends to be project-based, the local labour market needs to supply required industry-specific skills but also a high degree of flexibility in movement of workers across projects. In these cases, any regulation that restricts mobility would discourage investment.

In their study of FDI flows to 19 OECD countries during 1985-2000, Ham and Kleiner (2007) constructed a composite variable to examine the impact of industrial relations institutions on FDI flows. Their results show a negative relationship between industrial relations institutions¹ on the one hand, and levels of FDI inflows on the other hand. They supplement their main analysis with case studies of two countries, UK and New Zealand, which underwent major transformations in their industrial relations systems, from more labour regulation to less and to laws less friendly to organized labour, during the period of the study. As a result, both countries were able to draw much higher levels FDI than their comparable counterparts. The authors point out that their analysis does not factor in the high costs of making changes in the industrial relations system

¹ Measured as a composite of variables including the extent of union coverage, a measure of labor law restrictions on management, the degree of bargaining centralization and level of bargaining structure, and the extent of employee voice.

which is why we do not observe such substantial changes in other countries. It is also worth noting that such wholesale changes, i.e., deregulation of labour, cannot be undertaken too frequently because there is a natural limit on the extent to which the industrial relations system can be deregulated without causing large-scale disruption and incurring even larger costs.

But even among studies that show a negative relationship between investment and labour regulation, there is a growing number that are taking a more comprehensive look at the nexus between investment and conditions in the labour market. Payton & Woo (2014) examined the relationship between respect for labour rights and foreign direct investment (FDI). They posit that governments have a strategic role in attracting FDI. If governments set the level of labour regulation too high, investors could choose to stay away. On the other hand, governments could set labour regulation at a level at which enforcement costs are sufficiently low or the profits from investments are sufficiently high. At this level of regulation, some investors will choose to invest while others would go away, resulting in a sorting of investors. They use data from developing countries across time to find that strict labour laws tend to decrease inflow of FDI, but as more FDI flows into the country it leads to better labour practices.

Several other studies that have employed a more extensive modelling of the relationship between labour regulation and investment have begun to reveal a more nuanced picture than a more simplistic view of a negative relationship between labour regulation and investment. According to the results of a Delphi study from an international panel of experts, the most common motivation for manufacturing firms to locate internationally is access to low labor costs. However, the caveat is that labor costs need to be put into perspective depending on the needs of a given firm and industry. If a firm were competing on the basis of low costs (and hence, low labour cost), obtaining low labour cost may be a more important factor for a low value-added industry such as garments than for a high value-added industry such as biotechnology.

Two other studies both of which examine FDI flows from the U.S. to other countries are noteworthy because they include a number of measures of labour regulation and labour quality. Cooke (1997) in a study of the effect of industrial relations characteristics on FDI flows from the US to 19 other OECD countries found FDI to be negatively related to high levels of

unionization, centralized collective bargaining structures, stiff government restrictions on layoffs, and pervasive contract extension policies. On the other hand, FDI was positively related to the level of education and to the presence of works councils. The latter finding implies that factors contributing to human capital formation and orderly conduct of the workplace were attractive to capital investors.

The second study by Cooke & Noble (1998) analyzed FDI flows from the U.S. to 33 industrialized and developing countries across a sample of nine industries. They found that education is negatively related to FDI across low skill and low wage countries but education is positively related to FDI across high skill–high wage countries. Higher hourly compensation costs were associated with greater FDI. Three other factors that restrict flexibility, namely, government restrictions on layoffs, union penetration and centralized negotiation structures were negatively related to investment flows. The number of ILO standards ratified by the recipient country and presence of works councils were positively related to FDI.

Duanmu (2014) examined the destination of investments (FDI) by multinational enterprises from Brazil, Russia, India and China (i.e. the BRIC countries). They find that within the group of developed economies, relatively more FDI flows to countries with lower labor standards. However, this pattern is absent in FDI flows to developing countries. One reason may be that choice of FDI destination is highly path dependent, i.e., based upon previous trading relations between the origin and the destination country. The authors speculate that this path dependence washes out the effect of labour standards on FDI for the developing countries.

It should be noted that although Canada is not a developing country, policy discussions may consider the effects of trade on labour standards in developing countries because Canada's trade with emerging economies is on the rise and is forecasted to keep rising into the coming decades. For Canadian investors targeting developing countries for outward investment, labour standards can also serve as a proxy for the rule of law, a characteristic that is generally attractive to investors. Moreover, studies using a trade-based approach to labour standards suggest inward FDI fosters growth and this enables countries to improve labour regulations. In other words, the

process of development reverses the direction of causality in which inward FDI leads to higher labour standards (Greenhill, Mosley and Prakash 2009; Payton and Woo 2014).

5. Agglomeration and Labour Regulation

Concentration of industries in a given geography or agglomeration as it is called in the economic geography literature, is widely recognized as a key factor in the location decision. For the purpose of this paper, it is important to assess the implications of agglomeration for labour markets and policy. The idea was first formally proposed by Marshall who identified four advantages for firms in locating its operations within an agglomeration: a labour pool of skills specific to the industry; knowledge diffusion and spillover across firms; development of ancillary industries; and shared input resources (Scott 2000). The first two factors are directly related to skills in the local labour market; the latter two are also related, albeit indirectly, to skills in the available labour pool. Marshall's ideas have been refined and augmented over the years by others. Porter's (1980, 1990) theory of competitive advantage relies heavily on the concept of industry clusters within which firms develop their competitive strategy. Porter considers skills and knowledge as forming the core of a competitive strategy. Other studies have also emphasized localized learning and diffusion of innovation within clusters (Piore and Sable, 1984; Malmberg and Maskell, 2002).

These ideas have received further support from studies that have examined the relationship between investment flows and research and development (R&D) intensity. Chung & Alcácer (2002) examined FDI flows into U.S. states by R&D intensity of a given state. Using data from manufacturing during 1987-1993, they find that on average state R&D intensity did not have any significant effect on foreign direct investment. In contrast, they found that firms in research-intensive industries were more likely to locate in states with high R&D intensity. Of all the manufacturing industries, pharmaceutical firms appeared to place much greater value on a state's R&D intensity, almost twice as much as did firms in the semiconductor industry, and almost four times as much as did the electronics firms. This suggests that beyond catching up, firms use knowledge-seeking investments also to source technical diversity. The implication is that low-

technology firms were indifferent to R&D expenditures while the high-technology firms displayed significant interest in states with high R&D investments. Since R&D expenditures would be highly correlated with development of a skilled pool of labour, these findings have direct implications for labour policy.

Another possible implication of agglomeration for labour markets is the increase in competition for local labour. As more firms move into the same geographical area, they are likely to begin poaching workers with industry-specific skills and drive up wages. Employee turnover would also increase depending on how fast the markets and firms are expanding. One study found support for both these effects in the Mexican maquiladoras (Villalobos and Ahumada 2008).

These theories and empirical findings suggest that while labour costs may be an important determinant of investment flows, also important are labour regulations that may affect adequate supply of skills needed by firms.

6. The Impact of Labour Regulation on Markets

Partially in response to the narrative that extensive labour regulations and investment flows are negatively related and partially in an attempt to develop more comprehensive theories of the role of regulation in the labour market, a number of studies have proposed and tested propositions around the efficiency role of regulation. Findings of some research studies lend support to these propositions and suggest that appropriate and hence, “smart”, regulation can achieve societal goals better than an unregulated (or minimally-regulated) labour market.

A Race to the Bottom?

The argument for a race-to-the-bottom (RTB) is rooted in the assumption that lower levels of labour regulation reduce the overall cost of production which in turn increases competitiveness in a globalizing economy. Thus, deregulation of labour makes a jurisdiction more competitive and conversely, increasing regulation makes one less competitive. This is also the crux of a theoretical explanation for a negative correlation between labour regulations with investment flows. Gunderson (1998) argues that even if regulations add to the cost of production they may not trigger a race-to-the-bottom unless the following five conditions are met: laws must be

implemented and enforced; laws must raise labour costs or be perceived to raise costs; additional costs of regulation cannot be shifted back to workers or forward to consumers or the general population; higher legislated labour costs must deter investment; and, jurisdictions must compete for investment by reducing labour regulations. This is a tough set of conditions to meet for any study. Needless to say, no study has ever shown persuasive evidence for each of these steps in a race-to-the-bottom. A handful of studies are largely showing a bi-variate negative relationship between labour protections under certain regulations and flow of investments.

Empirical Studies

Davies & Vadamannati (2013) used data from 135 countries over 1985-2002 to examine if lowering of indices measuring labour rights, laws and “practices” (measured in terms of violations reported) in one country resulted in cuts in these measures in other countries. Over the period of the study they report declining levels of all three indices. The decline is less pronounced in OECD countries than in developing countries. Using spatial estimation techniques they find that the labor standards in one country are positively correlated with those elsewhere. This result is more pronounced in developing countries and in labour practices (i.e. enforcement) than in labour laws. The authors argue that the interdependence found in the data is evidence of a race-to-the-bottom in labour standards.

There are several problems with this study that makes its inferences somewhat overstated. First, the evidence is much weaker if one were to look at labour laws only. Second, the effect is more pronounced for labour “practices”, which are measured as reports of violations of the law. The validity of this variable is questionable because an increase in reporting cannot be equated to an increase in the true incidence. It may be, simply, that over time workers are becoming more aware of their rights, that there are more unions and NGOs to assist with complaints, or that the responsive governments are encouraging workers to come forth by creating new electronic channels via the internet and mobile technologies to report violations. Third, their model does not apply any direct controls for size of the workforce. Hence, a larger country could be expected to report more violations than a small country. Their model does include GDP and the labour force participation rate but neither of these are adequate replacements for a direct measure of the size of the workforce that is generating the violations.

Olney (2013) also tests the race-to-the-bottom hypothesis using outward FDI of US multinationals to OECD countries during 1985-2007. Employment protection regulations, as measured by the methodology developed by the OECD (2004), are used as a proxy for overall labour regulations. The study finds a reduction in employment protection rules leads to an increase in foreign direct investment (FDI). Furthermore, changes in employment protection legislation have a larger impact on the relatively mobile types of FDI. Second, he finds evidence that countries are competitively undercutting each other's labor market standards. While this study does have better data and controls, caution is warranted in generalizing it as proof of race-to-the-bottom at large. First, the study measures employment protection regulations only and not other types of labour regulations. Second, it covers a period when European countries pursued a program of labour reforms aimed at easing regulations covering hiring and firing; hence, the secular decline in labour regulation reported by the study. FDI also rose over the period as the world economy at-large grew in size generating bigger pools of globally mobile capital investments. The important point to note is that for many countries, these were one-time reforms and employment protection regulations could not be expected to keep going down for ever. Sooner or later when the employment protection index flattens out beyond the period of the study, the correlation with a still-growing FDI would decline, perhaps to near-zero. Third, during this period when Europe was pushing for labour reforms to employment protection, it also promoted the idea of *flexicurity*, a phrase to suggest that regulatory measures to increase labour flexibility were to be combined with policies to increase income security (Keller and Seifert 2002; Sarfati and Bonoli 2002).

Kucera (2002) investigated FDI flows in the 1990s across 127 countries to test the proposition that FDI flows find destinations with poor labour regulation more attractive. The study measures labour regulation across four dimensions of the ILO's so-called core labour standards: basic worker protections, freedom of association including collective bargaining rights, prohibition against child labour and prohibition against discrimination in the labour market. Results of econometric analyses are not definitive but suggestive. Most importantly, there was no evidence to support the conventional wisdom that FDI flows would be attracted to jurisdictions with poor labour standards. But the evidence here is also not unambiguously supportive of the efficiency

effects of labour regulation. For the most part, the study found no robust relationship with basic labour standards, and prohibitions against child labour or discrimination in the labour market. It did find a positive relationship between measures of freedom of association and inward FDI flows. A key problem with the study is its large sample of all countries irrespective of the level of development, which confounds the effect of labour regulation with the level of development.

There are other approaches to testing the efficiency hypothesis of labour regulation. Some studies focus on labour market outcomes rather than investment flows. Although these studies do not address investment flows directly, they are still pertinent to the question of efficiency in the markets which are theorized to attract investments. A study by Deakin, Malmberg and Sarkar (2013) improves on Kucera's design by using longitudinal data for the four decades after 1970 from only six countries at similar stages of development: France, Germany, Japan, Sweden, the UK and the USA. This study investigated the impact of labour regulation on unemployment and equality. Their use of panel data allows them to distinguish between short-run and long-run effects of legal changes. They do not find a consistent relationship between protective labour laws and unemployment but they do find a positive correlation with equality. Further, the study found that regulations governing working time and employee representation to have beneficial impacts on both efficiency and distribution.

A qualitative study by Gomez and Gunderson (2005) examined if there was any tendency towards convergence in social policy such as labour regulation as a result of deeper economic integration of countries taking the example of Canada-US trade agreements such as the FTA, which came into effect in 1988 and its augmentation later to NAFTA in 1994. After examining the evidence they concluded that while there had been a tendency towards convergence to the lower labour standards prevailing in the two countries, there was a "considerable diversity of policies" that prevailed even after a decade of the free trade agreement coming into effect, and that this reflected "a diversity of preferences and ability and willingness to pay..." (p. 42).

Similar assessments are offered by Banks (2004) who conducted an assessment of evidence to-date. Citing Gunderson (1998) among others he concludes that little systematic evidence exists on the existence of a race-to-the-bottom in labour standards as a result of freer trade and

investment. Banks argues that “since there is less difference in unit labour costs between OECD countries than between countries within and outside the OECD, other competitive advantages clearly override labour cost differences in determining the bulk of trade flows.” He has good reason to make that inference given that OECD researchers found that there is no significant relationship between changes in total country shares in manufacturing export markets and the application of ILO’s core labour standards (OECD 1996). The same study also concluded that resource-based and technology-based patterns of comparative advantage in manufacturing were “not altered by different levels of enforcement of core labour standards.”

A study by Greenhill, Mosley and Prakash (2009) takes a somewhat different approach to the issue of a race-to-the-bottom in labour standards. It develops and tests a model of labour standards diffusion through international trade. They propose that, all else being equal, labour standards of a given country are influenced not by some inevitable race-to-the-bottom but by the labour standards of its trading partners. They test this hypothesis using panel data covering 90 developing countries over the period 1986–2002. They find that strong legal protections of collective labor rights (based on measures developed earlier; see Mosley 2011; Mosley and Uno 2007), in a country’s export destinations are associated with more stringent labor laws in the exporting country. This effect is weaker for labor rights in practice, suggesting that even when there is convergence in laws there can be a gap in its enforcement.

The study by Payton and Woo (2014) mentioned earlier in this paper, used panel data and was able to examine the relationship between labour standards and investments over time. A key finding of this study is that over time greater FDI inflows lead to better labour standards. This relationship which has been reported elsewhere provides an important link in developing a more comprehensive and holistic view of the nexus between labour standards, investment flows and the process of development within which they are embedded.

Labour Regulation and Formation of Human Capital?

In much of the literature discussed above, labour regulations such as those contained in ES and LR laws, are viewed primarily as costs imposed on the parties by law. There is debate about its

effects on investments but there is general agreement they impose additional costs. Much of the theorizing and empirical investigation is based on this assumption. In contrast, another group of scholars and studies have explored the idea that labour regulations create not only rights and protections for workers but also “facilitate economic and human development” (Deakin 2011). In other words, labour regulations can enhance efficiency by bringing order to the marketplace and thus smooth the production process. Davidov (2007) argues that labour regulations play a role in enhancing efficiency whenever and wherever there are market failures. Labour regulations can minimize information asymmetries or reduce transaction costs (Collins 2000). Similarly, unions, whose creation is aided by the law, can channel grievances into collective action which can yield more efficient solutions than dozens of individual grievances that have the potential to impose costs and reduce efficiency. Labour regulations also compensate for incomplete or ambiguous employment contracts. In this way, they can promote trust between the parties to the relationship (Deakin and Wilkinson, 2000; Agusti-Panareda & Puig 2015; and Kolben 2010).

One stream of empirical research into possible efficiency effects of labour regulation comes from Freeman and Medoff’s (1984) investigations into the effects of unions on outcomes such as productivity, employee turnover, safety, quality and other outcomes. A comprehensive review of the evidence twenty years after the original book largely supports the original propositions of the 1984 publication (Bennett and Kaufman 2007). The collected evidence in this literature documents the many contributions of unions, as a mechanism for collective voice, to overall organizational efficiency.

Kahn (2012) reviews the effects of wage- setting institutions and labor market policies using data from eleven countries in North America and Western Europe. This study improves on previous ones by including only countries at similar stages of development and by measuring labour regulation across a larger number of dimensions: collective bargaining, minimum wages, employment protection laws, unemployment insurance (UI), mandated parental leave, and active labor market policies (ALMPs). It should be pointed out that this study is an assessment of the evidence rather than an original analysis of source data. Kahn argues that in an unregulated private sector, individual firms would have to either provide the benefits that these institutions provide or forego the benefits and face the consequences. If individual firms provide the

insurance, it would be invariably at a higher cost since they will not have the advantage of scale. So, it can be hypothesized that these regulations have the potential to enhance economic efficiency.

Results show that the interventionist model of countries in Northern and Central Europe lead to lower levels of wage inequality and high levels of job security to workers already employed. At the same time, this approach creates hardships for new entrants (disproportionately women, youth, and immigrants) and the less skilled by relegating them to temporary jobs or unemployment. Kahn argues that if labour regulation were to exclude these groups, workers would be free to enter the regular labor market which in turn would decrease wage inequality. This study signals both sides of our argument, i.e., it argues for greater flexibility in labour regulation even as it acknowledges the efficiency effects of regulation.

7. Discussion & Conclusions

This paper has reviewed the published research literature on linking labour regulation to investment flows. The review shows that labour policy variables are measured in a variety of ways by different studies. Many studies focus on the total labour cost which may include the direct costs of labour (wages, benefits, hours worked or not, etc.) but also the costs arising out of labour regulations. The upside here is the ease of measurement. Such data are collected and reported by many agencies. However, the downside is that it is hard to separate the true effect of regulations independent of the costs of paying wages, benefits, etc. Other studies have measured the presence of labour regulations by creating binary variables or constructing indices by combining those binary variables. The upside here is that one can get at the effect of regulations directly from the coefficients. The downside is that it is harder to collect and code such data and to avoid subjective biases inherent in the best way to combine a set of binary (“dummy”) variables for creation of indices.

The evidence reviewed above can be confusing when it comes to drawing inferences for policymaking. Some results are partial while some others are contradictory. In this section, this evidence is pulled together to see how best it can inform policy.

A number of studies reviewed above, but not all, show a negative relationship between labour regulations and investments. That is, all else being equal, an increase in the level of regulation would cause a decrease in investments. One inference to draw from these results would be that if one wishes to maximize investment flows, there should not only be no new regulations but the current ones should be repealed or removed. Such an inference would be an extreme (and selective) interpretation of the evidence. We have other types of evidence that need to be combined with this finding to derive better guidance for policy.

First, the world is not static. It is forever changing creating new opportunities and threats (externalities) that would require us to consider the role of labour regulations. Discovery of new technologies or growth of emerging economies or demographic shifts are some of the forces that may require a more considered response to labour regulations. Second, certain labour regulations may be social choices that we may make, such as eradication of child labour or forced labour, even if they have negative effects on economic efficiency. Third, a narrow interpretation of the negative correlation between labour regulation and investments would suggest that no country should ever improve regulations. If that were taken to the extreme, it would mean that regulations would be ossified into their current state or moved to an increasingly lower level. In another words, we would all be in a race-to-the-bottom. The studies reviewed in this paper do find some evidence of labour regulations being lowered. However, this evidence is far from definitive proof of a race-to-the-bottom for a number of reasons. First, the evidence of lowering regulations is found primarily in the case of making it easier for employers to hire and fire. There are no studies finding reductions in regulations such as safety or any of ILO's core labour standards. There are pressures to "harmonize" standards, especially, within trade zones such as NAFTA or the EU but that by itself does not imply a race-to-the-bottom. Second, a number of reviews of prior research find no evidence of a wide-spread race-to-the-bottom. Third, the tests applied to data in empirical studies are not comprehensive enough to prove a race-to-the-bottom. A true race-to-the-bottom test would show, over successive periods, that a reduction in regulations by one country led to similar reductions in regulations by other countries which then caused the originator of the reduction to further reduce its regulations. Technically, a race-to-the-bottom does not end until every country has moved to the lowest level possible. Much of the

evidence does not fit this pattern. What the evidence shows is that, say, in the case of employment protections, countries that had imposed a high level of protections relaxed them to a lower level. In most cases, these are one-time reforms, not a perpetual race-to-the-bottom.

If one views development as a process whose goal it is to improve the quality of working lives then a narrow interpretation of these studies would be self-defeating. It creates a circular argument: to develop one's economy you need to lower labour regulations which in turn lowers the quality of jobs and worker protections which is not the stated goal of development. Hence, we need to develop another narrative that is consistent with both the research evidence as well as a process in which labour regulations can lead to improving quality of jobs and working conditions for workers.

Such a view is possible if we build on the idea that a simple "more or less regulation" is not the right way to understand the role of regulations in the development process. Rather, it is regulation that is commensurate with the stage of development and the current needs of the actors (workers, organizations, governments) that is likely to be the most effective. This is another way of saying that it is possible to over-regulate in certain areas which would likely introduce inefficiencies such as reduced investments and anemic rates of job creation. At the same time, it is possible to under-regulate which will likely lead to efficiencies for some actors while it retards the growth of certain others.

Thus, studies that show a negative correlation between labour regulation and investments are signaling us to look for areas of over-regulation. In this respect, the studies that measure employment protection as a proxy for labour regulation are instructive. These findings suggest that we may have too many employment protections that are hurting investments and eventually, job creation. In such cases, an appropriate level of regulation may be lower than the current level. In their review of labour regulations in 85 countries, Botero et al. (2004) found that, "heavier regulation of labor is associated with lower labor force participation and higher unemployment, especially of the young."

We also know from empirical studies that even as we deregulate to increase investments, the higher level of inward investment flows would lead to higher labour standards. In this case, the optimal level of labour regulation can be viewed as an equilibrium where the supply of investments (determined by the level of regulation) meets the demand for investments (rate of job creation). In contexts where a high level of job creation is desired, e.g., in developing countries, it may be “smart” to start with a lower level of regulation which can be raised as economic development takes place. This is precisely what has been happening in countries such as China and India (Verma and Gomes 2014). China reduced its level of regulation, especially in the area of employment protections, in the 1980s and 1990s to spur growth. Having achieved high growth rates over more than twenty-five years, it is currently following a path of re-regulation to increase protections for workers.

Even though the two countries are at different stages of development, China’s case is instructive for Canada because it is easier to see how the huge inflows of FDI into China that were spurred by China’s deregulation of employment protections, are now compelling China to introduce ever more labour regulations. These FDI flows have led to improvements in its stock of human capital which make China an even more attractive destination for investments. Most studies find that a higher stock of human capital attracts more FDI (Busse 2002, 2004; Iwai and Thompson 2012). The point to take away from these research findings is that in order for an economy to keep growing, it has to upgrade its stock of human capital. It cannot grow simply by lowering and freezing its level of labour regulation. And, in order to keep improving its stock of human capital, it would need better and appropriate labour regulation.

The range of studies reviewed here suggests a number of contingencies within which we need to view empirical findings. One contingency suggested by our review is the type of industry. Not all industries are equally affected by greater labour regulation. Industries that use high technology or produce goods and services by adding greater value (i.e., high value-added), can be expected to accommodate more labour regulation, largely because they use higher levels of skills and pay better wages and benefits than the average firm. They compete less on the basis of costs and more based on innovative new products and services. Wages and benefits tend to be higher in these industries not only because of higher skills but also because of higher profit

margins which increases the employer's ability to pay. These firms are less sensitive to labour costs and more sensitive to an adequate supply of a skilled pool of labour. So, higher educational requirements and certifiable skills are a priority for these firms.

Firms in knowledge industries (e.g., IT) could accommodate a higher level of basic labour standards given that they operate well above the legal minima. However, they would be loathe to accept many restrictions on hours of work and other such regulations that may reduce flexibility. Given their higher skills and higher wages they would not want regulations that would hinder their ability to create high-performance work systems.

On the other hand, firms at the low end of this spectrum, i.e., firms using low technology and/or producing goods and services that do not add a lot of value (hence, low value-added) compete largely on the basis of total costs, appear to be much more sensitive to small increases in labour costs that may result from regulations like safety and health or increases in minimum wages. The business model of these firms is based on low margins and high volume. Their resistance to increased regulation can be seen as a pragmatic and rational response rather than an ideological opposition.

A related contingency that appears in the literature concerns industries and firms with labour costs forming a large fraction of the total cost. These firms are more likely to be resistant to labour market regulation than industries where labour cost constitutes a small fraction of the total cost. If labour costs are a small fraction of the total cost then the firm is less likely to be concerned about small incremental rises in the cost of labour.

Another contingency that enters the picture is that of the overall state of the economy both in the short- and the long-term. In the short term, the rate of economic growth signals the pace at which the markets can absorb the costs of higher regulation. For example, elsewhere it has been suggested that a growing economy is more likely to absorb increases in minimum wages without loss of jobs than a stagnant or shrinking economy (Verma 2013). Increases in labour costs (or regulation) are easier for employers to adapt to if they are incremental and if they are timed to occur in sync with an expanding economy. The flip side is that an economy in recession is less

likely to be able to accommodate higher labour costs without loss of current and potential jobs that would have been created by new investments.

In the longer-term, jurisdictions where other factors of competitive advantage are at play, can absorb greater regulation. If the principle factors attracting investments are all in place, such as, expanding markets, availability of capital and other inputs, low political risk, an attractive tax regime, etc., then it is less likely that increased labour regulation would discourage investment.

To summarize, this review has found the following important considerations for policymakers considering the state of labour regulations in Ontario:

1. There is no wide-spread evidence of a race-to-the-bottom in labour regulations across the globe or within developed or developing countries.
2. There is evidence that investors seek jurisdictions where their capital can be productive. So, they avoid over-regulation but are willing to accept reasonable levels of regulations if other (i.e., non-labour) factors are attractive, and if the regulations are evenly applied so that all firms compete on the basis of a level playing field.
3. There is room to regulate further in select areas. We do not appear to have hit the ceiling on labour regulations. However, more regulations in some areas should be considered alongside possibly less regulation in other areas.
4. Any increase in the level of regulation should be considered within the context of the level of regulation in countries with whom we trade and compete. If Canadian regulations fall within the range of regulations prevalent in these countries, it is unlikely that investments would flow away from Canada on account of labour regulations.

8. Policy Implications

I now return to the policy concern that framed the scope of this paper in the introduction. Given what we know from research, how should it inform labour policy going forward? I offer some principles that can inform future deliberations and government action.

Labour Regulation as a Policy Tool for Further Social and Economic Development

If we were to focus on the finding that increasing labour regulation discourages new investments then its logical extension over time would suggest moving to ever lower levels of regulation until one hits the bottom. Given that my review of the literature earlier did not find wide-spread and wholesale lowering of labour regulations in practice, with the exception of limited deregulation of employment protections, there is a need to consider alternate mechanisms. The historical record can be helpful here in considering alternate paths for development of regulatory policy. The trajectory of development, substantiated by evidence from every major economy that developed in the decades after World War II, is one in which investments inflows initially began while labour regulation was still at a lower level. As investments kept flowing in over time, they had the effect of pushing up wages and regulations that had a direct impact on improving working conditions. Increased regulation came about for two reasons: to improve the lives of workers, but also to facilitate orderly conduct of the labour market. Where regulations did not keep up with economic development, we generally find disruptions in the form of skill shortages, strikes, demoralized workforce or worse, all of which impose additional costs on the firm. It is for this reason that we see emerging economies such as Brazil, India and China introducing higher levels of labour regulation in some areas (e.g., income protections) even as they seek to ease regulations in other areas such as employment protections (Verma and Gomes 2014).

It is important to point out that different types of labour regulations may have different effects at various stages of growth. The task set out for this paper lumped together a wide variety of labour regulations: the full scope of ES and LR regulations in Ontario. Although the current exercise has yielded some useful insights about the complex relationship between labour regulation and investments, looking ahead it would be necessary to consider the different types of regulations individually or in groups of regulations that have similar characteristics. Giving them separate treatments may yield better insights into the relative impacts of each type of regulation on investment flows. Policy can then be guided more selectively deregulate in some areas even as other regulations are upgraded.

Long-term Policy Goals

Arguably, the proper role of policy should be to improve the lives of citizens. That is not only the moral thing to do but also an imperative of economic development. As the economy develops, more sophisticated and innovative products and services are produced which in turn require a more skilled workforce. Studies suggest that an unregulated labour market does not necessarily facilitate the orderly investment in human capital required for the development of a sophisticated labour market. This is particularly evident in many developing economies. Rather, the evidence suggests, as an economy develops it needs a rule-based framework that ensures fair treatment of all parties to the production process and fair returns to their respective contributions. The need for rule-based systems is just as important at the workplace level as it is at the firm, industry or national level. In developing countries, the process may start at the national level and work its way down. In a country like Canada which has a fairly formal rule-based system already in place at the national level, the focus may be at the industry level (say, safety in the mines), the firm level (say, reasonable accommodation) or at the workplace level (payment of overtime).

Labour regulation can play a significant role in moving an economy from a low-skill equilibrium to a higher skill equilibrium (OECD 2012; Verma 2012). Labour regulations set standards for work hours, safety, minimum level of training for a given occupation, etc. All those regulations add to the cost of entering the occupation. At the same time, benefits in terms of pay, hours, access to a union, etc., also go up. Workers have to acquire more hours of training to enter the occupation and as a result they are paid better than if the occupation were not regulated at all.

If labour regulations are improved over time and in step with economic development, we would see increasing demand for and increasing supply of higher skilled labour. As the economy moves to higher value-added production, some jobs that require low skills and are paid low wages, are eliminated. In a globally integrated economy these low skill jobs move to other jurisdictions and can be supplied through trade arrangements. Moving to higher skills and producing more sophisticated products and services is not an automatic outcome of the development process. Rather, it is a policy choice that governments must make and if they do so then it needs to be followed up with commensurate changes in labour policy.

Coordinating Labour Policy with Skills Policy

A jurisdiction such as Ontario needs to identify its long-term policy priorities. If Ontario chooses to move to a higher skill equilibrium, it needs to coordinate labour policy with a corresponding skills policy. In an economy that produces more sophisticated products and services, the workforce will need to be better educated and more highly skilled. Without a corresponding higher investment in skills, further improvements in labour regulation may not create greater prosperity. In fact, a labour policy imposing higher regulatory standards in the absence of a corresponding higher investment in skills of its people may result in making labour more expensive without increasing its productivity. In that case, the result would be lower investments leading to greater unemployment and declining prosperity.

The review of research evidence in this paper acknowledges earlier assessments that all else being equal investments in a given jurisdiction are sensitive to labour costs. In that sense, investors do “shop around” for suitable locations where labour costs are lower. However, when the concern is over how best to make policy for the future, one needs to go beyond to dig deeper into the nexus between labour regulation and investment flows.

In this respect, my review identifies the literature that has examined the efficiency role of labour regulation. If the implication of the negative effect of regulation on investments is a race-to-the-bottom in which every jurisdiction cuts its labour costs through deregulation, the efficiency hypothesis of labour regulation suggests that the this race-to-the-bottom will prove to be self-defeating because even as one tries to cut direct costs, the indirect costs would rise to not only neutralize the advantages of lower direct costs but would rise beyond that level to impose additional costs on society.

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Table 1 – Evidence on the Effect of Labour Regulations on Investment

Study (year)	Data Sample	Measurement of Labour Regulations	Outcome Measures	Effect on Investment (unless otherwise specified)
Calcagnini, Ferrando & Giombini (2014)	Europe (38) 1994-2000 AMADEUS	Employment Protection Index (OECD 2004)	Firm's Investment	Negative; mitigated by financial condition of the firm – firms in better financial shape were less sensitive to employment protection
Ham & Kleiner (2007)	19 OECD Countries 1985-2000	Industrial Relations System Index: <ul style="list-style-type: none"> • Labor laws • Union Density • Bargaining level • Bargaining Centralization • Worker Representation 	Inward FDI	IR System (-); “modest” size effect
Olney (2013)	US Multi-nationals 1985-2007	Emp Protection Index (OECD 2004)	Outward FDI <ul style="list-style-type: none"> - Affiliate sales - Horizontal FDI - Export-platform FDI - Vertical FDI 	Effect of emp. protection index on: <ul style="list-style-type: none"> - Affiliate sales (-) - Horizontal FDI (smaller -) - Export-platform FDI (larger -) - Vertical FDI (- and large)
Davies and Vadlamannati (2013)	135 Countries 1985-2002	<ul style="list-style-type: none"> • Labour Rights Index • Labour Laws Index • Labour Practices Index 	NA	<ul style="list-style-type: none"> • Decline in labour indices in one country related to declines in other countries • Effect more pronounced in developing countries
Coughlin, Terza & Arromdee (1991)	US Mfg.	<ul style="list-style-type: none"> • Average wage in mfg • Unemployment • Unionization • Right-to-work 	Inward FDI	<ul style="list-style-type: none"> • Average wage in mfg (-) • Unemployment (+) • Unionization (+) • Right-to-work (-)
Radulescu & Robson (2013)	19 OECD countries Mfg	Labour flexibility in hiring & firing (single question from survey by World Competitiveness Report)	Investments	Labour flexibility in hiring and firing (+)

Study (year)	Data Sample	Measurement of Labour Regulations	Outcome Measures	Effect on Investment (unless otherwise specified)
Glickman & Woodward (1988)	US Mfg.	“Labor Climate”: - Unionization rate - Strikes Av weekly earnings	Stock of foreign-owned capital between 1974 and 1980	“Labor Climate” (-)
Frank (2008)	US Film Industry	Labour Flexibility - Supply of industry-specific skills	Investments	Labour Flexibility (+) Supply of industry-specific skills (+)
Payton & Woo (2014)	100 Developing countries 1986-2002	Labour Laws Index Labour Practices Index Labour Gap (Laws-Practices)	Inward FDI	Strict labour laws (-) [Also, greater FDI leads to higher labour standards]
Husan (1996)	Poland - Auto Mfg	Labour Productivity Labour share of costs	Inward FDI	Labour Productivity (+) Labour share of costs (+)
Cook (1997)	19 OECD countries	<ul style="list-style-type: none"> • Unionization • centralized collective bargaining • restrictions on layoffs • contract extension policies • level of education • works councils 	Outward US FDI	<ul style="list-style-type: none"> • Unionization (-) • centralized collective bargaining (-) • restrictions on layoffs (-) • contract extension policies (-) • level of education (+) • works councils (+)
Cook and Noble (1998)	33 Developed & Developing Countries	<ul style="list-style-type: none"> • education • hourly compensation costs • restrictions on layoffs • unionization rate • centralized bargaining • number of ILO standards ratified • works councils 	Outward US FDI	<ul style="list-style-type: none"> • education (-) for low-skill-low-wage countries • education (+) for high-skill-high-wage countries • hourly compensation costs (+) • restrictions on layoffs (-) • unionization rate (-) • centralized bargaining (-) • number of ILO standards ratified (+) • works councils (+)

Study (year)	Data Sample	Measurement of Labour Regulations	Outcome Measures	Effect on Investment (unless otherwise specified)
Kucera (2002)	127 countries 1993-99	ILO Core Labour Standards: <ul style="list-style-type: none"> • Freedom of Association & Collective bargaining • Child Labour • Gender Discrimination • Democracy and rights 	Inward FDI	<ul style="list-style-type: none"> • Freedom of Association & Collective bargaining (mild +) • Child Labour (0) • Gender Discrimination (0) • Democracy and rights (+)
Duanmu (2014)	135 Countries 2003-2010	<ul style="list-style-type: none"> • Employment protection laws • FACB rights • Hiring & Firing Rigidity • Wage determination rigidity 	Outward FDI from BRIC multinationals to 135 countries	Developed/developing countries: <ul style="list-style-type: none"> • Employment protection laws (-/0) • FACB rights (-/0) • Hiring & Firing Rigidity (-/0) • Wage determination rigidity (-/0)
Greenhill, Mosley and Prakash (2009)	90 Developing Countries 1986-2002	Labour standards in export destination countries	Labour standards in an exporting country	Collective labour rights in the exporting country are positively associated with labour rights in export destination countries.