DISTRIBUTIONAL JUDGMENT IN INDIVIDUAL PREFERENCES OVER TRADE LIBERALIZATION

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In justice as fairness, men agree to share one another's fate – Rawls (1971) –

Introduction

Mainstream economists evaluate economic policies or their outcomes by asking whether they make the people better off. They often assume that one's well-being depends on her material well-being – *i.e.*, that one can improve well-being by increasing his or her own income; and that public policies aimed at increasing the income of the nation as a whole lead to greater public well-being (Easterlin 1995, 35-47). When the economists' evaluation of trade liberalization policies is contrasted with public preferences over the policies, this assumption poses an interesting puzzle. Few economic policies command as much consensus among economists as the welfare benefits of trade liberalization; yet public opinion polls have consistently revealed that that the public in most industrialized countries has been largely sceptical of trade liberalization policies (Caplan 2007; Irwin 2005; Fuller and Geide-Stevenson 2003, 369-387). What explains the discrepancy in views on trade liberalization between economists and the public?

For mainstream economists, public preferences over economic policy are conventionally understood as an expression of the material interest that individuals see at stake in the policy. Indeed, economists presume that the policy opinions are expected to be divided along the lines of winners and losers of free trade; and thus have focused their attention on identifying how trade liberalization is expected to affect the individual economic welfare of citizens. Moreover, while pointing to the long-term benefits of trade liberalization – notwithstanding trade-induced adjustment costs which they argue are accrued in a short run at most – many tend to attribute the prevailing protectionism among the public to a mere reflection of ignorance or irrationality of the public (Caplan 2007; Caplan 2002, 433-458; Hainmueller and Hiscox 2006, 469-498). Caplan for example argues that citizens have systematically biased beliefs about economics, which leads them to vote for protection although they in fact prefer the effect of free trade (Caplan 2007). That is, people would be as favorable toward free trade as are economists if they were able to grasp the "invisible hand" of the market and the concept of "comparative advantage," for example. Hainmueller and Hiscox likewise suggest that exposure to the economic ideas and information primarily shapes individual attitudes toward trade liberalization (Hainmueller and Hiscox 2006, 469-498).

In this paper however I argue that citizens vote for protectionism not primarily out of their low levels of economic literacy; but because they do not prefer the alleged effects of trade: *inequality* and *poverty*. Indeed, trade produces both positive and negative externalities: trade enhances efficiency and promotes economic growth; but at the same time it creates distributive consequences. As Hausman and McPherson (2006) clearly note, it is not generally possible to separate questions concerning efficiency from distributional questions – *i.e.*, between the size of the pie and the way it is sliced (Hausman and McPherson 2006).

They argue, by citing Samuelson (1950), even a preference for policies that generate Pareto improvement – *i.e.*, a change in income distribution that makes at least one individual better off without making any one else worse off – is not in general free of distributional commitments (Samuelson 1950, 1-29 and Hausman and McPherson 2006, 147). Given that positive and negative externalities likely affect trade preferences, the prevailing protectionism among the public may not stem from lack of understanding of the positive externality, but from strong countervailing effects of negative externalities against the positive.

While the mainstream economists tend to focus on the distribution of *private* costs within society as a basis of political opposition to trade liberalization, the modern behavioural economists find that individual's utility function is dependent not only on his or her own economic conditions but also the economic conditions of other individuals in the society (Hausman and McPherson 2006; Amiel and Cowell 1999). That is, trade liberalization may not be *socially* costless even when it increases the total income of the society without making anyone worse off. Given that one's well-being is affected by changes of other people's income and that people tend to prefer equalizing welfare gains than maximizing total welfare gains (Easterlin 1995, 35-47; Merton 1957; Easterlin 2000, 18-19), the distributive consequences of trade likely affect individuals' preferences on trade – not only that of those directly affected, but also that of those relatively unaffected by trade. Against this background, this chapter aims to demonstrate how much perceived inequality and poverty are to be tolerated, as a concomitant of income growth generated by trade liberalization.

More specifically, this paper tackles the following issues. First, I examine if the findings of behavioural economists that an individual's utility is highly sensitive to social comparison and relatively insensitive to absolute income (Tversky and Griffin 1991; Easterlin 2000; Rabin 1998) apply to the context of trade policies. Basically, I challenge the Pareto principle – which suggests that if at least one person is made better off and no one is worse off, then the social welfare must increase – by demonstrating that even if trade liberalization enriches the nation as a whole making no one worse off, distributive consequences of the policy could lean people toward protectionism. Second, I examine how much (perceived) trade-induced poverty would affect individuals' trade policy evaluations. I demonstrate that even if trade liberalization has positive effects on a country's economic growth, individuals would not prefer the policy if it means that the poor (the vulnerable) needs to be sacrificed (at least for the short term) for the general good of national income growth. Finally, I demonstrate that the Rawlsian preferences – inequality averse and other-regarding preferences – remain strong even after controlling for levels of economic literacy or feelings of job prospects.

This paper proceeds as follows. In the next section, I discuss the theoretical questions I explore and propose specific hypotheses to test. The focus is on how trade-induced positive and negative externalities offset each other and thereby affect individual trade preferences. I next describe the design of the studies I conducted and analyzed. Finally, I describe the experimental results and outline their implications.

Externalities of trade and trade preferences

Trade produces externalities that influence the country either positively or negatively. Externalities or spillover effects from trade policies mean benefits or costs that accrue to a third party who is not directly involved with the relevant transactions – *i.e.*, benefits or costs that influences the standard living of society as a whole while it does not monetarily affect the parties to the relevant transactions. Economists have long believed that trade liberalization enhances economic efficiency and promotes economic growth in the country. Trade may also produce negative externalities, such as inequality, insecurity, and poverty. This study focuses on two externalities of trade, *i.e.*, the effects of trade on inequality and poverty, and examines to what extent individual perceptions of the positive externality, *i.e.,* growth, are offset by the perceptions of the two negative externalities in determining trade preferences. This section introduces definitions of the concepts and hypotheses put to the test.

Positive externality: Growth

Schonhardt-Bailey (2006), while examining the role of ideas in Britain's repeal of its protectionist Corn Laws, demonstrates that positive externalities, *i.e.*, ideas couched in terms of the broader social welfare, can be used to garner support for trade liberalization (Schonhardt-Bailey 2006). Among potential positive externalities that trade liberalization may generate, that trade enhances economic efficiency and growth is probably the most appealing to a wide audience. Indeed, the idea that the open economies lead to more efficient allocation of resources and thus fare better in aggregate than do closed ones is very old, going back to Adam Smith and David Ricardo. More recently, economists have demonstrated trade liberalization can expedite the rate of growth through its incentive effects on investment, spillovers of technology, and innovation (Romer 1989; Grossman and Helpman 1992; Hejazi and Safarian 1999, 491-511). Empirical studies largely support that trade is correlated with, and often a source of, growth (Dollar 1992, 523-544; Sachs and Warner 1995; Sachs and Warner 1995). Scholars exploring public preferences for trade have recently suggested that the positive impact of education on trade attitudes may be explained by levels of exposure to such economic idea – *i.e.*, the idea that trade induces the overall efficiency gains and growth for the national economy (Hainmueller and Hiscox 2006, 469-498; Caplan 2006, 367-381). The specific hypothesis with relation to growth is as below:

> *H1. The idea that trade liberalization brings about economic growth will increase individuals' support for trade.*

The positive externality is hardly the only concern for individuals in forming their policy attitudes, however. Admittedly, mainstream economists and policymakers tend to equate social welfare with national efficiency gains or growth; but efficiency gains by trade liberalization are often accompanied by distributive consequences within countries, which likely comprise negative externalities for individuals. If individuals care not only about how trade policy influences absolute income growth but also how it affects their income growth relative to others, or social inequality in general, with a preference for policies that promote income equality, they may not support the policy even when they are aware of the positive

externality of trade. In the following section, I will discuss potential effects of negative externalities of trade on individual trade preferences.

Negative externality: Inequality

That trade liberalization exacerbates domestic inequality has been a staple of anti-globalization rhetoric. Admittedly, scholars do not seem to have reached a consensus on the question of whether it is indeed trade liberalization that contributes to widening income inequality being observed in many countries. Scholars such as Lundberg and Squire find that trade liberalization has led to a pattern of growth that disproportionately benefits the rich thereby worsening income inequality (Lundberg and Squire 1999). Other scholars however cast doubt on this assessment, showing that trade benefits the poor to the same extent that it benefits the whole economy (Dollar and Kraay 2000; Freeman 1995, 16-21). Notwithstanding the controversy, the simultaneity of the two developments seems sufficient to make economic openness the most prominent culprit in the eyes of the general public. Given that it is *perception* of the externalities that matters in shaping trade preferences, it is probably more important to ask how people perceive the link between trade and inequality, rather than whether trade indeed exacerbates inequality or not.

Inequality is a complex concept. It is a concept that can be distinguished from *insecurity*; and feelings of total *altruism* or *other-regarding behaviour*. First, I argue that inequality and insecurity are two different things. In fact, economic insecurity – job insecurity and labour market insecurity – has been considered the most frequent and powerful rationale for protectionist sentiment (Irwin 2005; Hays, Ehrlich, and Peinhardt 2005, 473), while inequality in the existing literature has either been treated interchangeably with insecurity or attracted scant attention. Indeed, since Atkinson's pioneering work, inequality and insecurity have often been treated as "intellectual cousins" (Amiel and Cowell 1999; Atkinson 1970, 244-263). Harsanyi, for example, used individuals' insecurity as basis for individuals' inequality-averse attitudes (Harsanyi 1953, 434). However, I argue that the perceptions of insecurity and inequality in the context of trade liberalization, though closely related, differ at least in the following two senses. First, concerns about increasing inequality inherently include perceptions of how trade liberalization affects the country as a whole – the so-called "sociotropic" perceptions – whereas concerns about insecurity are in principle egocentric. Anderson and Pontusson (1997), for example, conceived of economic insecurity as a function of both (1) the individual's estimate of the probability that she will lose her job and (2) the individual's perception of the consequences of losing their job (Anderson and Pontusson 2007, 211-235)). In contrast, perceptions of inequality are closely associated with interpersonal comparisons, and could be viewed as shaping attitudes toward trade liberalization, irrespective of increase or decrease in personal gains. Second, and related, non-negative income change – *i.e.*, income increases that accrue to everyone in the society – could invoke inequality perceptions, yet it does not evoke feelings of insecurity. For instance, more income to one person and no income loss to anyone else could increase the perception of inequality (if the income increase happens to go to the rich) but not that of insecurity.

Second, I use the concept of inequality to refer to "reference dependence" of an individual's utility function, which is differentiated from an individual's other-regarding preferences which I will discuss in the next section. By reference dependence, I mean that the tendency that people evaluate a policy not only by calculating the policy-induced increase in absolute income but also by making relative utility comparisons with a reference group, *e.g.*, "the rich". Suppose that one segment of the society were made better off, but on this occasion it happened to be the richest in the community. If that is the case, the relative position of the lower class worsens as average income rises. Although this sort of non-negative income change increases total income of the society with no one made worse off, some people might not feel that this represents an increase in social welfare. Indeed, scholars have empirically demonstrated that people tend to prefer equalizing welfare gains rather than maximizing total welfare gains (Amiel and Cowell 1999; Rabin 1998, 11-46); and that the Rawl's difference principle (Rawls 1999)– *i.e.*, in order for any change to be accepted as an improvement, the change should be the one that increases the utility of the worst-off individuals in society – best describes individual preferences when there is trade-off between efficiency and equality in pursuing economic policies (Mitchell et al. 1993, 629). The Rawlsian idea has also been tested in the context of trade liberalization. Herrmann et al. (2001) find that a large percentage of the general (American) public are intuitive Rawlsians (Herrmann, Tetlock, and Diascro 2001, 191-218): their experiments reveal that nearly 46 percent of American public favour restricting trade when the benefits go to the rich.

This paper focuses on the question of to what extent individuals' trade policy evaluations are affected by the perceived distributive consequences of the policy, as a concomitant of income growth generated by trade liberalization. By tackling the psychological implications of the trade-off between efficiency of income generation (economic growth) and equality of income distribution, this paper attempts to demonstrate that (1) the assumption that "more is better" – *i.e.*, the assumption that if income increases then overall policy support will also increase – is not substantiated; (2) protectionist backlash therefore reflects not so much that people are irrational as Caplan (2007) argues or lacking sufficient economic knowledge; but that they have inequality-averse social preferences, as an effective countervailing force against the effect of aggregate benefits from free trade[1]. The specific hypotheses to be tested in relation to inequality are as follows:

> *H2: Even if trade liberalization enriches the nation as a whole, many individuals will not prefer the policy if it widens income disparities between classes.*

> *H3: Inequality-aversion has little to do with levels of economic knowledge: even after controlling for economic knowledge or economic education experience, the effect of inequality-aversion on trade preferences will remain strong.*

> *H4: Concerns about their job prospects will be negatively associated with support for free trade, independently from inequality-averse preferences.*

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[1] In fact, scholars have suggested that a lack of job security could lead students to make status quo choices with their career. For example, Chang (2011) argues that the surging popularity of medicine as a subject among university applicants in Korea can be accounted for by the dramatic fall in job security after the 1977 financial crisis.

Negative externality: Poverty

Poverty and inequality are two different things. They touch on issues in common, but the presence of inequality does not necessarily mean the presence of poverty. In discussion of inequality above, for example, I only considered the case that trade liberalization makes all individuals in the society better off, while income goes disproportionally to the rich. In this case, one can say trade liberalization makes inequality worse but not poverty worse. This distinction is important because inequality and poverty discussed here draw upon different ethical concerns. Concerns for the poor – the least privileged citizens – are different from concerns for individuals' own relative gains, which is summarized as "envy" or "insecurity" discussed above, in the sense that they are derived from "other-regarding" preferences. John Rawls' justice in fairness argument that in original position under a veil of ignorance, "men [will] agree to share one another's fate" (Rawls 1999) offers an ethical viewpoint to explain why individuals often depart from pure self-interest as narrowly defined to pursue other-regarding goals.

One of the biggest concerns of critics of trade liberalization is its impact on the poor. Scholars however do not seem to have reached a consensus on the issue of whether trade liberalization is good or bad for the poor. Most economists posit that trade promotes economic growth, which consequently help alleviating poverty (Bannister and Thugge 2001; Winters, McCulloch, and McKay 2004, pp. 72-115). They argue that trade liberalization contributes significantly to poverty alleviation by improving resource allocation in favour of efficient activities where a given country enjoys comparative advantage, and making cheaper products more available to local consumers. Others however point out that the adjustment costs of trade liberalization often harm poorer actors in the economy, which could leave them behind in poverty even in the long term. Notwithstanding the controversy over the time horizon, it is hard to refute that those adversely affected by trade liberalization can be disproportionately poor at least in the short term, because the poor have fewer assets to absorb adjustment costs during economic hard times than other segments of society. Indeed, criticisms of trade liberalization's impact on the poor abound despite the general agreement of the economic literature that open economy promotes growth and growth is good for the poor (Harrison 2007).

Along with inequality-aversion discussed above, this paper aims to see how much (perceived) trade-induced poverty exerts a countervailing effect on trade preferences against the positive externality of trade (growth). The specific hypotheses to be tested are as follows.

> *H5: Even if people are informed that trade liberalization has positive effects on economic growth, many individuals will oppose the policy if they believe that implementation of the policy means that the poor needs to be sacrificed for the general good of national income growth.*

> *H6: The effect of other-regarding behaviour on trade preferences will remain strong even after controlling for levels of economic knowledge.*

Method: Survey experiments

This paper uses a survey experiment to directly test the hypotheses above. The study was conducted three times (April 2011, July 2011, and April 2012) at the Public Opinion Laboratory at the University of British Columbia. A total of 316 undergraduate students from the political science subject pool participated in the study. The experiment is a computer-based test designed to study effects of different treatments on responses. For this experiment, the subjects were randomly assigned to four different groups. Except for a control group receiving no introduction, each group received different introductions to a survey question about international trade. These introductions mention effects of trade on national income growth, income distribution, or poverty. The exact wordings are shown below:

Group 1: Control (No introduction)

Group 2: Growth
Suppose you believed that removing most restrictions on foreign imports would increase economic growth.

Group 3: Growth and high-income qualifier
Suppose you believed that removing most restrictions on foreign imports would increase economic growth, but that it would mostly benefit people with high incomes and would provide little or no benefit for others.

Group 4: Growth and poor people qualifier
Suppose you believed that removing most restrictions on foreign imports would increase economic growth, but that it would generally hurt low-income workers.

After the introductions were given, all subjects were asked the same core question about their attitudes toward government restrictions on foreign imports, which are presented below. The specific language was chosen because "restrictions on foreign import" is the most widely used language to measure protectionist sentiment in public opinion surveys, such as World Value Survey, Asia-Europe Survey, or International Social Survey Programme. In addition, in order to avoid forcing subjects to choose between an extreme view and all other less extreme views, I used the word "most" to make the policy less extreme – that is, from "remove restrictions" to "remove most restrictions".

(For subjects in Group 1) Do you agree or disagree with this statement: Canada should remove most restrictions on foreign imports.
- Agree
- Disagree

(For subjects in Group 2) Would you then agree or disagree with this statement: Canada should remove most restrictions on foreign imports.
- Agree
- Disagree

The specific claims in the introductions provided to the different groups were designed to measure to what extent trade's positive externality – growth (Group2) – is offset by its negative externalities – inequality (Group 3) or poverty (Group 4). These introductions allow us to test H2 and H3 above. If H2 is confirmed, we will see the high-income qualifier in Group 3 slide subjects toward more protectionism, in comparison with those exposed to the growth introduction (Group 2), despite the information that trade liberalization has positive effects on economic growth, making no one worse off in absolute terms. Likewise, if H5 is confirmed, we will see those exposed to the poor people qualifier (Group 4) are more inclined toward protectionism than people in Group 2.

I included three sets of items that measure economic beliefs, economic literacy, and economic insecurity, respectively. Prior to the subjects being divided into four groups and exposed to the four different introductions, they were given two different sets of questions about economic beliefs – one measuring their own belief about effects of free trade on economic growth and income inequality, and the other measuring subjects' information about economists' view of those effects. These two sets of questions were designed to see (1) how people think free trade affects economic growth and if they think free trade has the same effect across classes – *i.e.*, wealthy people, people with moderate income, and poor people; (2) whether there is a discrepancy between subjects' own economic beliefs and what they perceive to be economists' beliefs, and if so, by how much. The discrepancy between the two implies that when determining trade preferences individuals may not follow what economists say about trade even though they are accurately aware of them. The exact wordings of the questions are presented in Appendix.

Items to measure levels of economic literacy were also included in order to test H3 and H6. I first ask a question whether respondents have taken any courses in economics (*Econ course*). In addition, to measure levels of economic literacy directly, I included four quiz items to measure economic literacy. By adding up the four items, I created an index variable *Economic literacy*. The details are presented in Appendix. Along with the economic literacy measures, I also included questions asking how optimistic respondents feel about their job prospects after graduation (*Egocentric job prospects*) and about job prospects for Canadians in general (*Sociotropic job prospects*). They will be used as proxies for personal economic insecurity among undergraduate students.

Results

A first pass: Summary data on respondents' economic beliefs

Table 1 provides a brief summary of respondents' economic beliefs. An overwhelming majority of respondents (88%) say free trade would promote economic growth; and an even higher percentage (94%) answer they think economists say so. Also, most respondents (86%) agree that free trade would help the well-being of wealthy people, and about the same percentage of respondents (82%) perceive economists say so. But when it comes to the questions about the effects of trade on middle or lower income classes, the percentage of positive answers decreases and the discrepancy widens between respondents' personal beliefs and what they perceive as economists' opinions. While only 31 percent of respondents answer that free trade would help lower income and poor people, more than

half of the respondents (55%) still answer that they think economists say free trade would help them.

[Table 1]

To understand respondents' perceptions of the distributive effects of trade in a more systematic manner, I created a new variable *Distributive effects* that has three categories – (1) *Equal effects*, (2) *Unequal effects*, and (3) *Others* – by combining the three items above asking the effects of trade on different income classes. The category *Equal effects* includes those who hold one of the following three opinions: free trade would (1) help all income groups; (2) have no effect on any of these income groups; or (3) hurt all three income groups. The category *Unequal effects* encompasses all responses that suggest trade creates economic injustice of any kind – *i.e.*, greater disparities of wealth between classes – which range from responses that free trade would help the rich but hurt both the middle and the poor, to those that say free trade would have no effect on the rich and the middle but hurt the poor. The category *Other* includes the rest.

Table 2 reports the simple frequencies of each type of response mentioned above. Notably, only 20 percent of the respondents answer that free trade would benefit all three different income groups, while a total of 52 percent of the respondents suggest free trade creates greater disparities of wealth between classes. The differences between respondents' personal beliefs and what they perceive as economists' opinions are clear: 49 percent of the respondents perceive economists say free trade would benefit all three income groups, and only 26 percent perceive that economists say free trade would benefit the rich but hurt the poor, which are in clear contrast to the percentages of personal economic beliefs for each case – 20 percent and 43 percent, respectively. That is, people tend to believe that trade would have disparate effects on different income groups generating a greater income disparity between them, even when they are aware that economists would not agree. Indeed, 29 percent of those who answer that economists say trade would help the poor do not agree with them – that is, they believe that trade would hurt (or have no effect on) the poor even though they are aware that economists would say differently.

[Table 2]

As a first pass through the data, I did a quick test to see (1) if respondents' personal beliefs about free trade promoting economic growth or generating a greater income disparity indeed shape their attitudes toward trade, and (2) if the effects of those beliefs on trade attitudes, if significant, remain strong even after controlling for respondents' economic knowledge. I made use of responses only by the control group for this test because these are baseline trade attitudes not influenced by the "hypothetical" treatments of the conducted experiment. The results are shown in Table 3. First, I find evidence of a strong effect of the variable *Unequal effects* on trade attitudes, which survives even after controlling for *Econ course* and *Econ literacy* as proxies for respondents' economic knowledge. Column (1) in Table 3 shows that those suggesting that free trade would create a greater income disparity between classes are 54 percent more likely to hold views against free trade than those suggesting trade would have no such effect. This is quite a striking difference, given that the variable *Growth* has no significant effect on trade attitudes – *i.e.*, those who answer that free trade would

promote economic growth are no more likely to support trade than those who answer free trade would not promote growth.

[Table 3]

Effects of inequality and poverty on support for trade

Table 4 reports the simple frequencies of each type of response in each of the four treatment groups. The results show that (1) the growth introduction has large effects on responses; and that (2) both inequality and poverty introductions have significant countervailing effects against the growth introduction. First, compared to respondents who were given no introduction to the question about trade (Group 1), 18 percent more respondents said they would support removing more restrictions on foreign imports if it increased economic growth (Group 2). Second, however, when the growth introduction is presented in combination with the high-income qualifier or the poor people qualifier, the effect of the growth introduction weakens substantially. Compared to those who received the growth introduction only (Group 2), 43% fewer respondents who received both growth introduction and high-income qualifier (Group 3) said they would agree with Canada removing restrictions on foreign imports. Likewise, although to a lesser degree, the poor people qualifier has a similar effect: 33% fewer individuals agreed to removing restrictions. In short, the results confirm the two hypotheses above (H1 and H3): even if they are informed that trade liberalization promotes economic growth, many individuals would not support the policy if it widens income disparity among classes or harms disproportionately the poor.

[Table 4]

Then, do the countervailing effects of high-income and poor people qualifier against growth primarily reflect lack of exposure to economic ideas, as often suggested (Caplan 2002, 433-458; Hainmueller and Hiscox 2006, 469-498; Caplan 2006, 367-381; Hiscox 2006, 755-780)? Table 5 reports the response frequencies in each treatment group subdivided by "education experience" – *i.e.*, a variable that divides respondents into two groups: those who have taken a course in economics and those who have not. Except among respondents who were given a growth introduction only (Group 2), a significant difference is found between the two groups: those who have completed a course in economics are less likely to support free trade than those who have not. While the education effect appears weakened by the treatment introductions – *i.e.*, the education experience makes the biggest difference among those in a control group who received no introduction (Group 1) and little difference in a group with the growth introduction (Group 2) – the effect still remains clear in the other two groups (Group 3 and 4). This suggests that the countervailing effects of the qualifiers against growth are not explained entirely by the difference in education experience.

[Table 5]

Stark differences are found between those who are optimistic about their job prospects and those who are not. Table 6 shows that across the board respondents who are

optimistic about their job prospects are more likely to agree to removing restrictions on foreign imports than those who are not optimistic. The difference is starkest among respondents who received the growth and high-income introduction (Group 3) or poor people qualifier (Group 4): compared to those who said they were not optimistic about job prospects, among those said optimistic about 20 percent more individuals agreed to Canada removing import restrictions in both groups. Likewise, albeit to a lesser degree, the growth introduction also exerts more negative influence on support for trade among those not optimistic about job prospects. These results are basically in line with the existing empirical finding showing that trade preferences are closely associated with economic (or job) insecurity. Yet it is still noteworthy that it is respondents' general lack of confidence in job "prospects" – not their current perceived job insecurity but job insecurity about their future – that shaped trade preferences. The results have two important implications: (1) the facts that respondents who are not optimistic about their job prospects are more susceptible to the high-income and poor people qualifiers than those who are optimistic, and that they in general do not prefer removing restrictions suggest that a lack of confidence in job prospects may lead people to make status quo policy-decisions; and (2) the fact that the respondents are "students" from the political subject pool that are likely to be constituting a socio-economically homogenous group suggests that the effect of job prospects is largely psychological not based on their social economic status.

[Table 6]

To gauge the impact of the treatments and its relation with economic knowledge and job insecurity in a more precise manner, I estimate individual trade preferences using binary logistic regression. Table 7 reports the results from logistic estimations that include the core explanatory variables above. The numbers in the table are marginal effects on the probability of being anti-trade, given an increase in the value of the relevant independent variable holding all other independent variables at their mean. Model 1 estimates the general impact of each different introduction to the trade question (1 = disagree to removing import restrictions (anti-trade) and 0 = agree (pro-trade)), using the "no introduction" treatment as a baseline category here. Consistent with the findings in Table 1, the estimated general effect of the growth introduction is to increase support for trade (removing import restrictions) by 27 percent (s.e. 8%), that is, having exposed to the growth introduction versus no introduction at all increases support for trade by 27 percent. Model 2 is the same model as Model 1 but with the growth treatment as a baseline category. Model 2 shows that having exposed to the high-income qualifier along or the poor people qualifier with the growth introduction decreases support for trade by 39 percent (s.e. 6%) and 31 percent (s.e. 7%), respectively, in comparison with having exposed only to the growth introduction.

Models 3 and 4 report the results from logistic estimations that include a set of different measures of economic education. Model 3 estimates the effect of economic education, using the variable *Econ course* (1 = having taken a course in economics and 0 = not having taken a course). The result shows that those who have taken a course in economics are on average 12 percent (s.e. 7%) more likely to support free trade. Model 4 repeats the same analysis replacing the binary variable for economic education (*Econ course)* with the index variable *economic literacy* on a scale from 0 to 1 where 0 means no correct answers to the economic literacy questions presented in Appendix and 1 means all correct answers to those

questions. Model 4 shows that economic literacy has a significant positive impact on the probability of agreeing to remove trade restrictions: 10 percent increase in economic literacy corresponds to 4 percent more support for trade. The fact that taking economic literacy influence into account does not show the three treatments to be spurious is important because it implies that the ideas that trade produces growth, inequality, or poverty indeed matter for shaping trade preferences and that the effects do not stem from lack of economic literacy. Individual interests in learning economics have also significant impact on support for trade (Model 5): those who show no interest in taking a course in economics are on average 13 percent (s.e. 7%) more likely to say no to removing import restrictions than those who answer that they are expected to take a course in economics or would take a course in economics if it fit into their schedule.

Model 6 shows that egocentric job prospects have a statistically significant impact on support for trade, which basically confirms findings in Table 6. Compared to those who said they felt not optimistic about their personal job prospects after graduation, among those who said optimistic, 17 percent more people agreed to removing restrictions on foreign import; and this difference between those who are optimistic and those who are not are statistically significant. Sociotropic job prospects have no significant effect, however. What is important is that job prospects measures do not make the effects of the three treatments any less important: even after controlling for feelings about personal job prospects, the three treatments still have strong effects on trade attitudes.

[Table 7]

The results can be summarized as follows. First, the ideas of all three externalities trade produces – growth, inequality, and poverty – exert significant influence on support for trade. More importantly, the two negative externalities of trade liberalization – inequality and poverty – have strong countervailing effects on support for trade against the positive externality of trade (growth): that is, respondents reject trade liberalization in which the rich become richer or the poor become poorer even if it leads to economic growth. Second, both economic literacy and economic insecurity are associated with trade preferences: the more economic literate the more support for trade; the higher economic insecurity the less support for trade. Even when controlling for economic literacy or economic insecurity, however, the effects of the externalities on trade preferences do not become any less important. Third, taking economic insecurity into account shows the relationship between economic literacy and trade preferences to be spurious. This suggests that it is their job prospects rather than levels of economic literacy that shape trade preferences. Given that respondents are undergraduate students from the political science subject pool who can be viewed as potentially constituting a socio-economically homogenous group, what appears to matter more for shaping trade preferences is a psychological factor, such as feelings about job prospects, rather than skill-levels or exposure to economic knowledge as often suggested.

Admittedly, the experiments are not without limitations. Although the experiments reported here were designed mainly to see the impacts of "ideas" on policy preferences, the possibility that the results may also reflect framing effects – *e.g.*, effects of different levels of intensity of language used in each treatment, which might create emotional responses – was

not excluded. Also, the internal validity of the experiments is achieved at the expense of external validity. The data collected here represent only the opinions of the university students. Notwithstanding the limitations, it is hard to deny that inequality-growth trade-offs in shaping trade preferences are strong; and that there is no compelling reason to predict for other subject populations systematic divergences from the patterns found here.

Conclusion

Recently, French president Nicolas Sarkozy suggested that the dogma of economic growth is no longer sustainable; and proposed replacing Gross Domestic Product (GDP) with a new measure that takes account of the quality of living, *e.g.*, *joie de vivre* index. Upon Sarkozy's request, the Commission on Measurement of Economic Performance and Social Progress (CMEPSP) was created, aiming to identify the limits of GDP as an indicator of economic performance and social progress and to suggest more relevant indicators of social progress (Stiglitz, Sen, and Fitoussi 2009). In the report by the Commission, Stiglitz and Sen write:

> *When there are large changes in inequality (more generally a change in income distribution) gross domestic product (GDP) or any other aggregate computed per capita may not provide an accurate assessment of the situation in which most people find themselves. If inequality increases enough relative to the increase in average per capital GDP, most people can be worse off even though average income is increasing* (Stiglitz, Sen, and Fitoussi 2009).

The findings of this paper provide some confirmation of Stiglitz and Sen's insight: if the fruit of economic growth through trade liberalization is unequally shared, making the rich richer and/or the poor poorer, the rise in average income may not lead to increase in subjective well-being of people thereby making them vote for more openness. In fact, experimental economists have found that factors other than income growth affect individuals' assessment of their own subjective welfare, and that these same factors may also influence individuals' responses to economic policies (Frey and Stutzer 1999, 755-778). The findings of this paper suggest that widening income inequality is one such factor in the politics of trade liberalization. The findings thus have an important policy implication: Policymakers committed to trade liberalization should take into account the issue of how the policy influences those at the bottom or at the top of the income distribution; as well as the issue of whether it increases average income of the country. The findings also suggest that the gap between information contained in aggregate GDP data and what accounts for common people's subjective well-being may not stem from ignorance or irrationally of individuals; rather, the gap may be better accounted for by complexity of the well-being of individuals. The facts that differences in perceived job prospects are more important determinants of support for trade than economic literacy, and that differences in perceived job prospects here have psychological roots – given that participants in political science subject pool are undergraduate students that can be viewed as constituting potentially a socio-economically homogenous group – uncover limitations of both Hieckscher-Ohlin based explanations and Hainmueller and Hiscox's or Caplan's economic idea based explanations of trade preferences.

The purpose of this paper was to provide an empirical test of how much perceived inequality and poverty are tolerated, as a concomitant of income growth generated by trade liberalization, using undergraduate students in a Canadian university. Further study is needed to see if the findings of this paper can be generalizable to countries with different socio-economic development levels or socio-economic values. In fact, experimental economists find that empirically income increases subjective well-being at low levels of development but once a threshold around $10,000 is reached, the average income level in a country has little effect on average subjective well-being of the people (Frey and Stutzer 2002, 402-435). Also, Alesina et al. find that there is a large negative significant effect of inequality on subjective well-being of the people in Europe but not in the United States (Alesina, Glaeser, and Sacerdote 2001, 187-254). Given these existing findings, equality-growth trade-offs may systematically differ across countries with different development levels or a given country's dominant social, economic values. Policymakers committed to trade liberalization may need to get a better sense of the country-specific level of equality-growth trade-offs so that they can incorporate it into their calculation when designing and implementing trade policies aimed at improving people's well-being and thereby gaining more public support.

Table 1: Economic beliefs and information about economists' opinions

	Personal beliefs	What perceived as economists' opinion
Growth		
– *Free trade promotes growth*	88% (247)	94% (273)
Distributive effects		
Free trade helps economic wellbeing of		
– *Wealthy people*	86% (250)	82% (222)
– *People with moderate income*	61% (168)	71% (187)
– *Low income and poor people*		
	31% (86)	55% (145)

Notes: Entries are valid percentages, and the numbers displayed in parenthesis are frequency counts.

Table 2: Beliefs on distributive effects of trade

	Personal beliefs	What perceived as economists' opinions
Equal effects		
– *Free trade benefits all*	20% (49)	41% (98)
– *Free trade has no effect on any of the three or hurts all*	2% (4)	1% (2)
Unequal effects		
– *Free trade benefits the rich more than the poor*	43% (103)	26% (63)
– *Free trade benefits the rich more than the poor but hurts no one*	9% (22)	6% (14)

Notes: Entries are valid percentages, and the numbers displayed in parenthesis are frequency counts.

Table 3: Effects of personal economic beliefs on trade attitudes (Control group only)

Logit estimation		
Dependent variable = Anti-trade dummy	1	2
Economic beliefs		
– *Growth*	0.11 (0.18)	0.16 (0.15)
– *Unequal effects*	0.54 (0.21)**	0.45 (0.19)*
Economic knowledge		
– *Econ course*	-0.52 (0.14)**	
– *Economic literacy*		-0.58 (0.30)+
Log likelihood	-24.15	-26.48
Observations	46	46

Notes: The table contains the estimated marginal effect on the probability of being anti-trade, given an increase in the value of the relevant regressor, holding all other regressors at their mean value. The standard error of the marginal effect of each relevant regressor are presented in parenthesis. + significant at 10%; * significant at 5%; ** significant at 1%. *Anti-trade dummy* is coded as follows: *Anti-trade dummy* = 1 if respondent disagrees with the statement that Canada should remove most restrictions on foreign import (= 0 if agrees). *Growth* is coded as follows: *Growth* = 1 if respondent answers that he (or she) thinks free trade would promote growth (= 0 if else). *Unequal effects* is coded as follows: *Unequal effects* = 1 if respondent answers free trade would (1) hurt the poor but help the middle and the rich; (2) have no effect on the poor but help the other two; (3) hurt the poor and the middle but help the rich; (4) have no effect on the poor but hurt the middle and help the rich; or (5) have no effect on the poor and the middle, but help the rich (= 0 if else). *Econ course* is coded as 1 if respondent has completed a university course in economics and 0 if no. *Economic literacy* is an additive index of the average number of correct answers to four questions measuring economic literacy, which ranges from 0 (no correct answer) to 1 (all correct answers). The details about each economic literacy question are presented in Appendix.

Table 4: Treatment effects on responses about import restrictions

	Question: Would you then (or Do you) agree or disagree with this statement: Canada should remove most restrictions on foreign imports.	
		Remove restrictions
All respondents (N = 270)	*Disagree (Anti-trade)*	53% (143)
No introduction (Group 1)	*Disagree*	57% (34)
Growth (Group2)	*Disagree*	29% (25)
Growth and high-income qualifier (Group 3)	*Disagree*	72% (43)
Growth and poor people qualifier (Group 4)	*Disagree*	62% (41)

Notes: The numbers displayed are frequency counts. The percentages displayed in parentheses are column percentages.

Table 5: Economic education and treatment effects

	Question: Would you then (or Do you) agree or disagree with this statement: Canada should remove most restrictions on foreign imports.			
		Remove restrictions		
		Econ course taken	*Econ course not taken*	*Differences*
All respondents (N = 269)	*Disagree*	49% (89)	61% (54)	- 12%
No introduction (Group 1)	*Disagree*	47% (19)	75% (15)	-28%
Growth (Group 2)	*Disagree*	32% (18)	27% (7)	+5%
Growth and high-income qualifier (Group 3)	*Disagree*	68% (28)	79% (15)	-11%
Growth and poor people qualifier (Group 4)	*Disagree*	57% (24)	71% (17)	-14%

Notes: The numbers displayed are frequency counts. The percentages displayed in parentheses are column percentages.

Table 6: Job prospect and treatment effects

Introduction	Question: Would you then (or Do you) agree or disagree with this statement: Canada should remove most restrictions on foreign imports.			
		Remove restrictions		
		Job optimistic	*Job not optimistic*	*Differences*
All respondents (N = 248)	*Disagree*	49% (64)	61% (67)	-12%
No introduction (Group 1)	*Disagree*	52% (15)	62% (16)	-10%
Growth (Group 2)	*Disagree*	20% (7)	33% (13)	-13%
Growth and high-income qualifier (Group 3)	*Disagree*	61% (20)	84% (21)	-23%
Growth and poor people qualifier (Group 4)	*Disagree*	58% (22)	74% (17)	-20%

Notes: The numbers displayed are frequency counts. The percentages displayed in parentheses are column percentages.

Table 7: Logistic regression: Protectionist sentiment (Individual attitudes toward restrictions on foreign import)

Logit estimation

Dependent variable = 1 if respondent disagrees with the statement that Canada should remove most restrictions on foreign import (= 0 if agrees).

	1	2	3	4	5	6	7	8
Introductions								
No introduction		0.28	0.28	0.31	0.27	0.33	0.37	0.26
		(0.09)**	(0.09)**	(0.09)**	(0.09)**	(0.10)**	(0.10)**	(0.07)**
Growth	-0.27							
	(0.08)**							
Growth and high-income qualifier	0.16	0.39	0.39	0.42	0.38	0.43	0.47	0.38
	(0.09)+	(0.06)**	(0.06)**	(0.06)**	(0.07)**	(0.07)**	(0.06)**	(0.07)**
Growth and poor people qualifier	0.06	0.31	0.31	0.31	0.31	0.38	0.39	0.34
	(0.09)	(0.07)**	(0.07)**	(0.09)**	(0.07)**	(0.07)**	(0.07)**	(0.07)**
Economic education								
Econ course			-0.12					
			(0.07)+					
Economic literacy				-0.44			-0.48	
				(0.11)**			(0.12)**	
No interest in economics					0.13			
					(0.07)+			
Job prospect								
Egocentric						-0.18	-0.17	
						(0.07)*	(0.07)*	
Sociotropic								-0.10
								(0.07)
Log likelihood	-171.74	-171.74	-169.88	-163.75	-170.04	-152.41	-144.24	-155.15
Observations	270	270	269	270	270	248	248	245

Notes: The table contains the estimated marginal effect on the probability of being anti-trade, given an increase in the value of the relevant regressor, holding all other regressors at their mean value. The standard errors of the marginal effect of each relevant regressor are presented under each marginal effect (+ significant at 10%; * significant at 5%; ** significant at 1%).

Appendix: Items to measure economic beliefs, economic knowledge, and economic insecurity

Items to measure economic beliefs and information about economists' opinions

Personal beliefs:
    (Growth) How do you think free trade would affect economic growth?
        Free trade would promote economic growth
        Free trade would not promote economic growth
        Free trade would have no effect on economic growth

    (Distributive effects 1) How do you think free trade would affect economic well-being of wealthy people?
        Free trade would help wealthy people
        Free trade would hurt wealthy people
        Free trade would have no effect on wealthy people

    (Distributive effects 2) How do you think free trade would affect economic well-being of people with moderate income?
        Free trade would help people with moderate income
        Free trade would hurts people with moderate income
        Free trade would have no effect on people with moderate income

    (Distributive effects 3) How do you think free trade would affect economic well-being of lower income and poor people?
        Free trade would help people with lower income and poor people
        Free trade would hurts people with lower income and poor people
        Free trade would have no effect on lower income and poor people

Economists views:
    (Growth) How do you think economists say free trade affects economic growth?
        Free trade promotes economic growth
        Free trade does not promote economic growth
        Free trade has no effect on economic growth

    (Distributive effects 1) How do economists say free trade affects the economic well-being of wealthy people?
        Free trade helps wealthy people
        Free trade hurts wealthy people
        Free trade has no effect on wealthy people

    (Distributive effects 2) How do economists say Free trade affects the economic well-being of people with moderate income?
        Free trade helps people with moderate income
        Free trade hurts people with moderate income
        Free trade has no effect on people with moderate income

(Distributive effects 3) How do economists say Free trade affects the economic well-being of lower-income and poor people?

> Free trade helps lower-income and poor people
> Free trade hurts lower-income and poor people
> Free trade has no effect on lower-income and poor people

Items to measure economic knowledge

Economics background:

> Have you completed a university course in economics?

>> Yes
>> No

Interest in learning economics:

> Do you expect to take a course in economics?

>> Yes
>> No

> [If no] Would you take a course in economics if it fit into your schedule, or are you just not very interested in economics?

>> I would take a course in economics if it fit into my schedule
>> I am not very interested in economics

Economic literacy:

The economic literacy index variable is created with the four questions below. The last three questions above are adopted from *Test of Economic Literacy*, National Council on Economic Education (1987), which was re-used by Walstad (Walstad 2002, 63–96).

> According to the economic theory of comparative advantage, which countries benefit from international trade?

>> **All countries**[2]
>> Small countries
>> Poor countries
>> Wealthy countries

> Which of the following challenges do all economic systems face? How to:

>> balance imports and exports
>> balance the government's budget
>> **make the best use of scarce resources**
>> save money to reduce the national debt

> One reason the federal government might reduce taxes is to:

>> slow down the rate of inflation
>> slow down a rapid rise in interest rates
>> decrease business spending on plant and equipment

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[2] Correct responses are shown in bold.

increase consumer spending and stimulate the economy

Which of the following statements about tariffs is true?
Tariffs benefit export industries.
Tariffs benefit consumers.
Tariffs benefit import-competing industries.
Tariffs encourage the growth of the most efficient industries.

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