

2019 ESSAY CONTEST WINNERS
*WHAT IN THE WORLD WOULD
ADAM SMITH SAY?*





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Our mission is to improve the quality of life for Canadians, their families and future generations by studying, measuring and broadly communicating the effects of government policies, entrepreneurship and choice on their well-being.

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WELCOME

Dear Readers,

Whether you are transitioning into the next phase of your academic career or progressing to a new semester, we hope that you feel energized from your summer break and are excited by the “back to school” vibe.

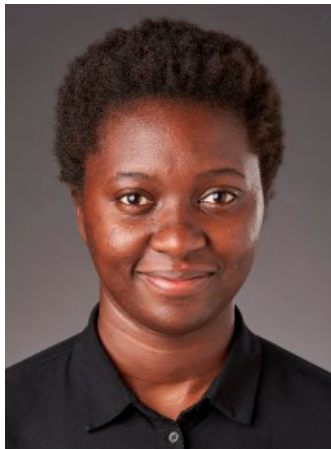
In this edition of the *Canadian Student Review*, we highlight the winners of the 2019 Essay Contest. We received over 300 submissions that answered the question “What in the World Would Adam Smith Say?” in response to policy issues ranging from automation and artificial intelligence to protectionism. Elsewhere, our former intern and now junior economist, Tegan Hill, presents the top reasons why government budgetary deficits matter.

The environmental effect of single-use plastics has come into focus lately. Senior Fellow Vincent Geloso examines some of the unintended consequences that may accompany bans on plastic bags. He also explores alternative measures for reducing plastic garbage.

We hope that you enjoy this issue of CSR and that you can join us at one of our *Explore Public Policy* post-secondary seminars this fall. Make sure that you’re connected with our Education Programs Facebook page (www.facebook.com/EducationPrograms) to stay up to date and find out when we are in a city near you!

Best,

Mirabelle and Ryan



Mirabelle Arodi



Ryan Hill

PROTECTIONISM: LEARNING FROM PAST FAILURES

NORMAN ZENG

Since the conception of modern economics, the debate between free trade and protectionism has been a point of major contention. While the dispute has been settled for economists—free trade winning an outstanding victory—for the world as a whole, the fight continues. Although most economists advocate for free trade, both sides of the political sphere have been moving in the opposite direction: protectionism has been on the rise. This is occurring in many countries in the West, but the protectionist movement is best highlighted by the actions of President Trump and his call to “put America first.” His message encompasses the idea that by increasing tariffs with other countries, America stands to benefit. Trump’s ideals, however, are not unique: they have been espoused by many before him. In order to debunk the protectionist illusion, it would make sense to not only consult modern economic research but also to read the writings of earlier philosophers. One such candidate is Adam Smith, the father of modern economics and a scholar who, through his writing, fought for the implementation of free-market policies in Britain and left a lasting legacy in the field of economics.

One of Smith’s major contentions with the economic policies of his time, which he described in his magnum opus *An Inquiry into the Nature and Causes of the Wealth of Nations*, was the prevalence of protectionism. While he did not blindly oppose the ideology, Smith stood apart from other 18th century thinkers as a staunch proponent of free trade. During the 18th century, most countries in Europe were mercantilists, attempting to amass wealth in their own nation by imposing tariffs on neighboring countries. While this occurred some 250 years ago, the misconceptions that held sway with 18th century rulers still pervade public discourse and politics today. Among these theories is the notion that tariffs placed on foreign imports will protect domestic

producers in the same industry. Closely tied to this idea is the misconception that trade is a zero-sum game, with proponents claiming that the success of one country necessarily leads to loss for another. In fact, protectionism leads instead to reduced global stability and provides a breeding ground for war.

While these misconceptions seem logical, they don’t consider many of the factors that make up an economy. Modern markets operate on capital: business owners employ their wealth to create products and provide services, which are, in turn, bought by consumers using their capital. Unfortunately, the stock of a country is set; Smith (1776/1976), in a chapter on economic regulation, explains that “the general industry of society can never exceed what the capital of the society can employ.” By implementing a tariff with the intention of protecting a domestic industry it does not, as is often believed, increase a nation’s wealth or employment. Instead, it diverts the nation’s resources to the service of the protected industry. This is concerning because industries in need of protection are often either inefficient or wasteful. Protectionism only serves to allow these failing industries to continue at the expense of increasing prices for consumers hoping to obtain the industry’s commodities.

This effectively creates what is akin to a monopoly for business owners in the home country. For the same reasons that normal monopolies are detrimental, domestic monopolies also damage the economy by reducing competition. Reduced competition will lead to higher prices for consumers and allow businesses the opportunity to exploit their hold over the market for personal gain. Implementing protectionist policies only encourages companies that cannot compete with foreign companies to take advantage of the country’s own citizens. Smith (1776/1976) states in *The Wealth of*

Nations that “consumption is the sole and end purpose of production; and the interest of the producer ought to be attended to, only so far as it may be necessary for promoting that of the consumer.” Protectionist policies do not benefit the consumer as politicians claim. Instead, such policies protect companies from the foreign competition that will allow consumers to obtain better prices and products.

The steel industry provides a good example of the follies of protectionism. In 2002, President

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Bush imposed tariffs on foreign imports of steel. This ended disastrously: researchers found that in 2002, around 200,000 Americans lost their jobs due to increased prices of steel. More Americans lost their jobs from these tariffs than the total number of steelworkers in the country (Francois and Baughman,

2003). This example demonstrates the absurdity of protectionism: by attempting to protect one industry, many sectors of the economy dependent on low steel prices were hurt. Recently, history has repeated itself with President Trump’s imposition of tariffs on steel and aluminium imports. While these taxes have recently been lifted for a few countries—among them Canada and Mexico—there is no guarantee of

permanence, and Trump does not seem averse to reinstating these tariffs.

Protectionist policies can also inhibit world peace and stability. Protectionism is built upon principles of nationalism: put the home country first. This combination of economic policy and political ideology harkens back to Europe’s period of mercantilism, a system of political economy that, as mentioned earlier, focused on accumulating wealth by hoarding vast amounts of gold and silver in one’s own country. Smith diametrically opposed this ideology. Among his other qualms, Smith believed that mercantilism was a major contributing factor to the wars that wracked the 18th century. He argued that the economic system encouraged countries to gather wealth in peaceful times such that they “may have the wherewithal to carry on foreign wars” (1776/1976). In Smith’s time, the consequences of mercantilism became apparent in battles such as the Seven Years War and the American Revolution, the former of which partially resulted from tariffs and economic regulation between Britain and France, and the latter of which partially resulted from Britain’s desire to amass wealth for the mother country at the expense of its colonies.

The consequences of tariffs that stifle international trade are not limited to the mercantilism of Smith’s time—protectionism also had a part to play in causing the most devastating war of the 20th century. While many remember World War II for the horrific deeds and battles fought by the military, many of the root



causes of the war lie in economic issues, the main contributing factor being the Great Depression. Protectionism significantly exacerbated the effects of the Great Depression. After the stock market crash in 1929, many countries moved towards protectionist policies in a tribalistic attempt to mitigate the problem. The first of these countries was the United States.

In 1930, the US enacted the Smoot-Hawley Tariff Act, a piece of legislation that greatly increased tariffs on international trade. The consequences of the Act were disastrous. It was not only futile in helping America, but the Act provoked counteraction from many other nations, specifically, a sharp increase in tariffs and trade barriers that deepened the already grim economic situation. Researchers estimate that 41 percent of the fall in world trade from 1929 to 1932 was due to protectionism. This estimate is conservative; the researchers' model operates on the assumption that tariffs were independent of nominal income, the other large factor in falling world trade (Madsen, 2001). The economic turmoil of the Great Depression had devastating effects on the world, reducing the standard of living and robbing many of their life savings. In Europe, this economic downturn caused extreme discontent that was one of the key factors contributing to the Second World War. Protectionism may seem benign, but it can have far-reaching repercussions for world peace.

After WWII, nations began to recognize the failures of protectionism and fight against it. In 1947, the General Agreement on Tariffs and Trade (GATT) was created with the aim of limiting tariffs and other inhibitors of free trade between nations. From 1947 until it fell under the management of the World Trade Organization in 1995, the GATT was wildly successful. It lowered average tariffs from about 22 percent in 1947 (still much lower than during the Great Depression) to less than 5 percent (Bowin and Irwin, 2015). These liberal trade reforms have undoubtedly aided the expansion of trade and ushered in an era of peace and prosperity.

However, economists, legislators, and voters cannot afford to be complacent. Protectionism is once again on the rise. Nationalist movements have emerged supporting politicians that treat international trade as a zero-sum game. They believe that the betterment of one country can only be achieved at the expense of another. They espouse the same arguments as the mercantilists that Smith fought to debunk and believe in the same theories as those who enacted the Smoot-Hawley Act. While the protectionists want to repeat the past, most citizens do not have such a desire. A repeat of mercantilism is bound to result in economic disaster, and likely to result in another global conflict. The new protectionist movement must be stopped in its tracks before we come face to face with the consequences. ◆

Norman Zeng is a recent graduate of Bell High School in Ontario. He is currently studying psychology at the University of Toronto and hopes to continue developing his interests in psychology and research.



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ADAM SMITH: A PROPONENT OF AUTOMATION

TYLER LEGG

Adam Smith was perhaps the most influential thinker to have an impact on the early Industrial Revolution. In a time when technology was advancing at unprecedented rates, Smith's writings provided a level-headed analysis of the benefits of emerging technology. The British Parliament used his most famous work, *The Wealth of Nations*, as a foundational text in its creation of the British Empire's expansive economy, which touched many corners of the globe (Otteson, 2018). While the world has progressed much since his passing, Smith's ideas continue to remain relevant. As automation and artificial intelligence (AI) begin to change the way our society produces goods and services, many suspect that we may be entering a new technological revolution. This time of rapid change and automation has many parallels with the Industrial Revolution, and a prudent mind might turn to the prescient words of Adam Smith and ask the question: what would the father of economics say about the future of automation in the workplace? I argue that Adam Smith would encourage automation, holding that it is a natural progression in humanity's propensity to innovate and find more efficient means of production. He would also argue that automation will serve to increase the quality of life for society by making stronger and more plentiful economies. I will begin by outlining why Adam Smith would believe that automation is the obvious next step in human progression and then describe why he would say automation is beneficial to society.

According to Smith, humanity's predilection to exchange goods and services leads to the division of labour and the innovation of new technologies in order to increase trading power and the profit one receives (Smith, 1776: 9). He argues that it is much more efficient for individuals to specialize in the production of a specific good and trade the surplus

of that good to their fellow citizens for the goods that those individuals need than it is for each person in a society to themselves craft everything they need to survive (Smith, 1776: 9). Within the specialization of trades and production, Smith's concept of the division of labour describes how people split up tasks into smaller activities so that each task may be completed more quickly. In his famous example of the pin makers, Smith explains that a group of workers that each spend a day making all parts of each pin themselves will work much more slowly than if the workers work as a group and one straightens the wire, one sharpens the pin, and so on (Smith, 1776: 9).

Smith saw the division of labour as having three main benefits. First, people who have simplified tasks become much more proficient at those tasks because practice increases speed and efficiency. The alternative is to be moderately skilled at a multitude of tasks (Smith, 1776: 9-12). Second, in a manufacturing setting, when workers stay focused on their one task, they lose no time switching between jobs (Smith, 1776: 10-11). Third, individuals focused on a single task are more likely to innovate and find more efficient ways of doing that task, thus lending themselves to an increase in production efficiency (Smith, 1776: 12).

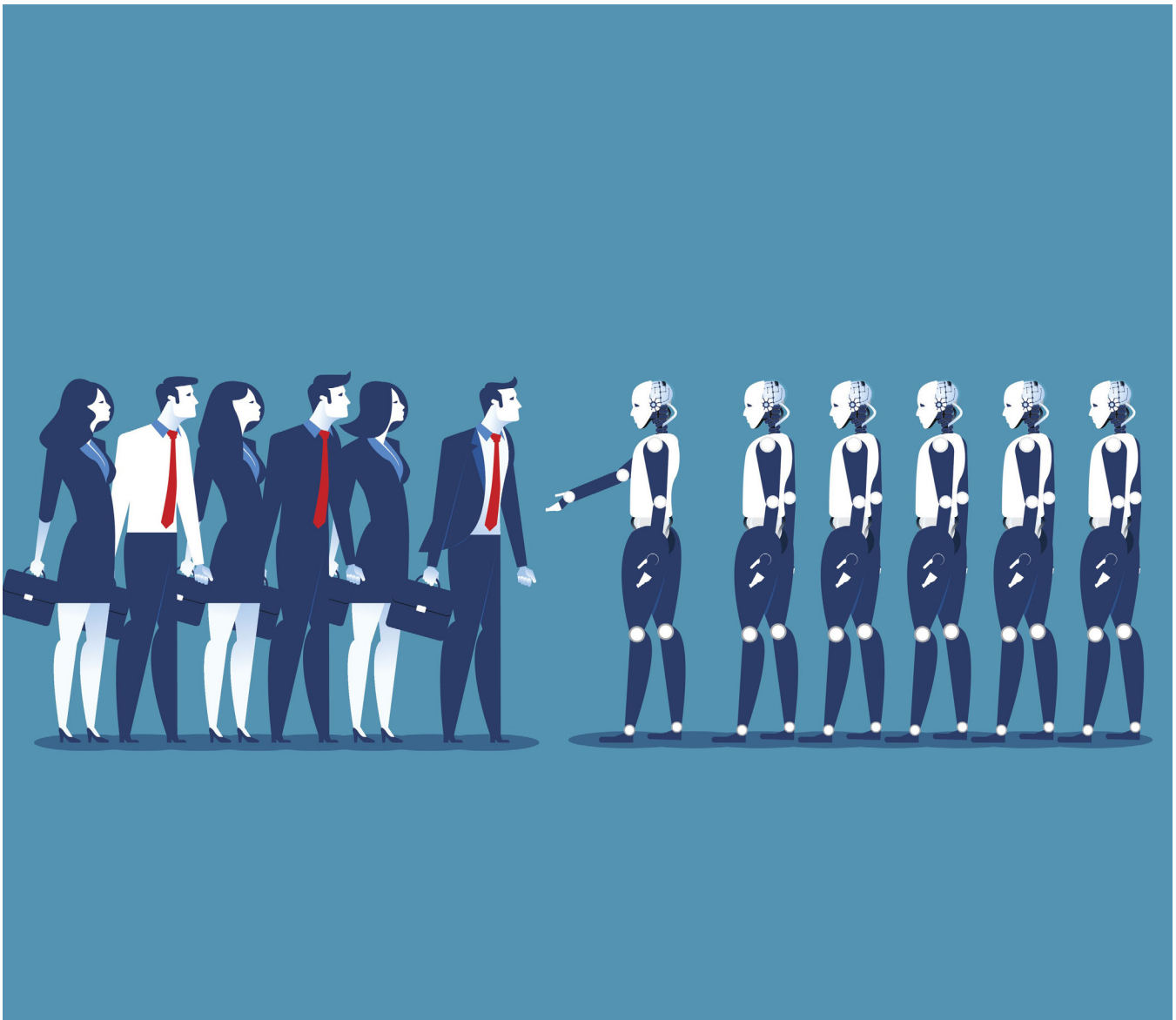
HUMANITY'S PREDILECTION TO EXCHANGE GOODS AND SERVICES LEADS TO THE DIVISION OF LABOUR AND THE INNOVATION OF NEW TECHNOLOGIES IN ORDER TO INCREASE TRADING POWER AND THE PROFIT ONE RECEIVES

These innovations often result in new and improved machines—as was the case in Smith’s time when innovations were the driving force behind the Industrial Revolution. Machines enable workers to repeat their tasks quickly without losing time (Smith, 1776: 12).

Just as Adam Smith was a proponent of industrialization in the 18th century, he would argue in support of automation in the 21st century for the same reasons. Automation is a revolutionary advancement according to Smith’s three aspects of the division of labour, and is a natural progression in human technology. First, automation allows people to simplify tasks in the sense that they no longer have to engage in

the tasks themselves. Having an automaton that cleans, folds, and does other menial work removes the need for humans to engage in those activities. Second, automatons and AI can work faster and more precisely than humans, and require no rest apart from occasional maintenance. Third, Smith would point out that those who lose their jobs to automatons can spend more time educating themselves and finding innovative new ways to complete tasks using automatons.

While Smith spoke highly of the division of labour, he did acknowledge several fundamental flaws in its practice. Because the division of labour requires specialization, a worker’s job often becomes just a



few simple, repetitive tasks. Because workers have no need to exercise their body or mind outside of those few simple tasks, Smith laments that workers will become “as stupid and ignorant as it is possible for a human creature to become” (Smith, 1776:603). Not only would workers lose intellectual function, Smith felt they would become morally corrupted and lose their general physical prowess (Smith, 1776: 603). Smith saw automation as a simple solution to this. Workers in an automated economy need not spend their days toiling away at mind-numbing tasks on a production line. Workers can pursue work, health, and education free of such stultifying tasks and duties, and thus automation can save humanity from the detriments of the division of labour.

Adam Smith would likely have confronted those who say that automation will destroy the livelihoods of countless workers by replacing them with machines. Those who put forth such ideas are only half wrong, according to James Manyika and Kevin Sneider of the McKinsey Institute: “6 of 10 current occupations have more than 30% of activities that are technically automatable” (Manyika and Sneider, 2018). Many jobs may be completely lost to automatons, yet for every job automaton renders redundant, several more will take its place (Manyika and Sneider, 2018; Greenwood, Lewis, and Guszczka, 2017; Pringle, 2018, October 5). The World Economic Forum has predicted that AI alone will create approximately 58 million new jobs in the coming decades, creating a massive boom in a sector that was all but unheard of several decades ago (Pringle, 2018, October 5).

Adam Smith would recognize what is happening: that jobs are lost, but that people are switching to new, more productive forms of work. This happened at the beginning of the Industrial Revolution, and has happened several times since then. For example, in the early 1900s, approximately 12 million people worked in the American agricultural industry (Litzenberger, 2018). By the year 2000, thanks to technological development, only 2 million people worked in American agriculture despite the fact that there were 200 million more mouths to feed than there were in 1900. Technology has also opened up new industries that were unimaginable even 50 years ago, such as

app or website development engineers. There is no reason to believe that automation will not carry on the trend of cutting jobs in one sector while creating even more jobs in another. These new jobs will be different from those of the past; they will require less physical labour and more human skills than automatons and AI possess. Critical thinking, problem solving, creativity, and social skills will become more sought after by employers.

Adam Smith would say that automation will increase the quality of life for people just as the Industrial Revolution did. As efficiency and production increase with the division of labour, more consumer goods become available on the market. These consumer goods become cheaper, and increase the standard of living for all members of society due to their plentifulness. This increase of goods benefits society while also allowing people to act in their own self interest, as those who attempt to create a surplus and sell it at competitively low prices to others assist their fellow citizens by making these goods available at better prices and qualities.

In the future, when menial jobs often deemed to be undesirable are automated, the human “propensity to truck, barter, and exchange one thing for another” could manifest in a “sharing economy” (Smith, 1776: 15; Clay and Camfield, 2011, September 22). According to Fast Company’s Alexa Clay and Jon Camfield, the sharing economy of the future could be one in which surplus goods are traded and capital is rendered obsolete, meaning that “even if we substitute aspects of our labor force with robots, our natural proclivity towards exchange will ensure that people are re-distributed in new sectors” (Clay and Camfield, 2011, September 22). If humans can automate menial tasks with robots and AI, we can focus on “humanizing” the economy by creating more jobs that play into the natural strengths of humanity.

A picture of this ideal future, where automation is the perfect servant of the economy, was painted by Edward Bellamy in his 1888 novel *Looking Backward*. Bellamy describes the United States in the year 2000 as an ideal place. Technology has advanced to the point where people only have to work a few hours

a day in order to produce great amounts of surplus goods to be traded, thus allowing people to live in security and prosperity. In Bellamy's future America, technology allows people to work part time so they can devote the rest of their waking hours to enjoying the wealth of their society and engaging in their interests and hobbies. This fantasy world is not far from the projections Adam Smith put forward in the 1700s. Adam Smith would see automation as a chance for humans to pursue this ideal future, using open markets and the division of labour alongside automation to follow humanity's natural technological evolution. ◆

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FUTURE OF AUTOMATION IN THE WORKPLACE

ISABELLA GERMINARIO

Workplace automation is no longer a threat to just routine and low-paying jobs. Many highly-trained, highly-paid jobs are also at risk of being replaced as automation lessens its dependence on breaking down how humans process information and tasks. In October 2017, an artificial intelligence program, Case Cruncher Alpha, won a competition against 100 commercial lawyers in London, England; it was able to accurately analyze 86.6 percent of legal cases vs. 62.3 percent that the lawyers reviewed (Cellan-Jones, 2017). According to a study conducted by the leading global consulting firm, McKinsey and Company, approximately 45 percent of paid jobs currently performed by humans could be replaced by machines (Chui, Manyika, and Miremadi, n.d.). Fear of job loss due to automation has been increasing and is widespread.

Should we fear a jobless future as a result of workplace automation? What does the future of automation in the workplace mean? Nearly 250 years ago, Adam Smith, the father of modern economics, foresaw that the division of labour and a market economy were the fundamental forces behind raising most people's standard of living. As if it were a beacon in a stormy sea, Smithian market economy theory has been helping to guide many world economies as they build their wealth. We can only imagine what Adam Smith might think and say about the future of the workplace as it faces being uprooted by automation. By examining the matter through a Smithian lens, this paper argues that workplace automation will substantially increase labour productivity, fundamentally transform the concept of what "a job" is, and unleash human creativity.

First, automation in the workplace will enhance labour productivity to unimaginably high levels. In his 18th

century *An Inquiry into the Nature and Causes of the Wealth of Nations* (*the Wealth of Nations*, hereafter), Smith wrote that "every man is rich or poor according to the degree in which he can afford to enjoy the necessaries, conveniences, and amusements of human life." Smith argued that the division of labour allows specialization and dexterity, which significantly enhance labour productivity and is the ultimate cause of economic growth (Smith, 1776/1991: viii). He also pointed out that "the invention of a great number of machines ... facilitate and abridge labour and enable one man to do the work of many" (Smith, 1776/1991: 17).

Automation in the workplace is essentially an extension of the division of labour. The only difference is that tasks that were initially performed by humans are now divided among human and imitation humans, such as robots and artificially intelligent devices. Robots and machines are used for tasks that humans are not able to perform, or where machines can execute them more efficiently and/or cost-effectively than humans. As a result, automation rapidly increases labour productivity while lowering the unit cost of producing goods and services. Furthermore, as a drastic enhancement in labour productivity, each worker could produce thousand-folds, or even million-folds, more goods and services than before. Thus, with the integration of machines and automation in the production process, even though the product unit labour cost is reduced, the wage earned by each labourer will increase substantially as the number of goods and services produced in a given period of time expands. Consequently, the overall level of labour value in any time period will be growing to reflect the leap of labour productivity: automation will raise the income level for workers. Therefore, the economy

will grow, and the standard of living for the majority will be improved.

Second, automation in the workplace fundamentally changes the concept of a job and the way people work. As Smith noted, the extent of the division of labour is only limited “by the extent of the market” (Smith, 1776/1991: 15). For instance, in a small, isolated village in the 18th century, where people lived scattered across the countryside, the market would have been tiny and limited. Back then, every farm had no choice but to bake its own bread, butcher its own meat, and brew its own beer (Smith, 1776/1991: 16). The subsequent division of labour was not designed by any one person but instead arose from the need to exchange goods and services (Smith, 1776/1991:12). This is “the market.”

Along with automation, many new technological phenomena have extended the boundary of the market. Today, with digitization and the Internet of Things, even someone living in a rural village can exchange goods and services for value with any person

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in the world via the internet. The market has expanded and connected. Recently, the “gig economy” has emerged and is snowballing as more and more platform companies, such as Uber and Deliveroo, design proprietary applications to expand the market for buyers and sellers, and match supply with demand.

The market expansion resulting from technological progress determines the degree and speed of this new division of labour, known as automation in the workplace. According to the New Economics Foundation, the gig economy in London’s transport sector has been doubled since 2010 (Quick and Baskerville, 2017). Meanwhile, another innovation—the “sharing economy”—which includes Airbnb, Zipcar, and Snapgoods, helps people earn income at their convenience (Grybaitė and Stankevičienė, 2018: 636).

The progress and pace of automation in the workplace corresponds to the market’s ever-increasing demands.

The development of technological progress and current workplace automation have been gradually reshaping the way people work and how they think about their jobs. It is no longer the case that the majority of jobs fit the pattern of “9-5, M-F, sole organization.” According to the US Bureau of Labour Statistics, approximately 27 million people in 2016 chose to make their living with part-time jobs (2018). In 2017, the Freelancers Union and Upwork found that 57.3 million Americans were freelancers, accounting for 36 percent of the workforce in the US. Furthermore, 63 percent of those survey respondents had become freelancers by choice (Poon, 2018: 63-64). Another survey conducted by Deloitte in 2016 of 7,700 millennials in 29 countries revealed that 66 percent of respondents intended to quit their current jobs to become freelancers by 2020 (Deloitte, 2016: 2-4). With workplace automation continuing to increase, jobs will have more flexible work hours, workers will have more autonomy in how and when they work, and more independent workers will replace traditional employees. Workplace automation has the potential to enable humans to earn more income while working less and enjoying their lives more.

Third, automation in the workplace will galvanize people to be innovative in increasing their well-being. As per Adam Smith, the reason some nations are rich while others are poor is because of differences in their political-economic systems (Otteson, 2018: 34-35). In *The Wealth of Nations*, Smith made an empirical comparison of the production of various goods over time to show how different policies affect productivity and the wealth of nations (Otteson, 2018: 35). In his book, *The Essential Adam Smith*, James Otteson argues that Smith’s “spontaneous order” is the most efficient arrangement of the market economy because a free market is an “economizer,” benefits from local knowledge, and functions as an “invisible hand” (Otteson, 2018: 40). Simply put, the economizer argument says that every individual acts in his or her own best interests. The local knowledge argument posits that each person knows himself or herself best; the invisible hand argument states that individual decisions guided by self-interest lead to a pattern or

an order for the market economy that also benefits others and society's overall well-being (Otteson, 2018: 40-49).

Automation in the workplace enables humans to work fewer hours and earn more money than is the case without it. On average, today's full-time workers work 20 or 30 fewer hours every week than they used to in the 19th century (Roser, 2019). Future generations will no longer work long hours to make a living.

Both historical trends since the Industrial Revolution and present cross-country data show that as productivity increases, people earn more, even with fewer working hours. With the extra time saved each day, people can devote time and effort to making their lives better. Under the market economic system, individuals make their own decisions based on what is best for themselves. In fact, the 2015 Global Creativity Index reveals that per capita GDP correlates closely

to human creativity. As long as the government maintains market economic order, individuals will have incentives to pursue better economic conditions in the most efficient method available.

By using Smith's theories to examine automation, we can conclude that automation in the workplace is the new division of labour; it will enable humans to reach unprecedented labour productivity, which will inspire economic growth. As labour productivity increases, automation in the workplace will reshape the concept of "a job" and how humans work. Jobs in the future will be more flexible, and automation in the workplace can help humans to pursue what is best for them. Workplace automation offers great potential to raise everyone's standard of living and it will liberate humans' well-being by reducing their working hours, increasing their income, enabling them to enjoy more leisure, and encouraging them to become more creative and productive. ◆

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BUDGETARY DEFICITS: WHY DO WE CARE?

TEGAN HILL

A budget deficit occurs when the government spends more than it collects in revenue over the fiscal year. Budget deficits have important economic and financial implications. They include:

Deferred taxes: Governments can either pay for their spending today or finance spending through borrowing; the latter implies a budgetary deficit. But eventually someone must pay for this borrowing. In this way, deficits implicitly defer taxes to future generations, with interest.

Diverted program spending: The government must pay interest on its debt. This represents an opportunity cost; each dollar spent paying interest is a dollar diverted from important public programs. In recent history, interest on debt cost as much as 36 cents of every dollar raised in tax revenue.

Recession risks: During a recession, spending will automatically increase and revenues will immediately decrease, even before any discretionary action (like

stimulus spending). For example, as unemployment rises, Employment Insurance (EI) payments increase, while revenues for EI decrease (due to declining incomes and/or rising unemployment). This effect compounds existing deficits.

Rising Interest Rates: As demand for borrowing increases, there is upward pressure on interest rates. As interest rates rise so does the cost of borrowing, for everyone. For the government, this means an increase in the cost of servicing our debt. For the private sector, a higher cost of borrowing may discourage private investment that would have taken place in a lower interest rate environment.

Risk of inflation: If the government finances spending by increasing the money supply, it may lead to inflation. In Canada, monetary policy has largely resolved this risk, but it remains an important consideration. ◆

Tegan Hill is a former intern, and now junior economist at the Fraser Institute. She holds a Bachelor of Economics and is currently completing her Master's degree in Public Policy from the University of Calgary. Ms. Hill's articles have appeared in major Canadian newspapers including the Globe and Mail, National Post, and Ottawa Citizen. She specializes in government spending, taxation, and debt.



TECHNOLOGY, AUTOMATION, AND EMPLOYMENT: WILL THIS TIME BE DIFFERENT?

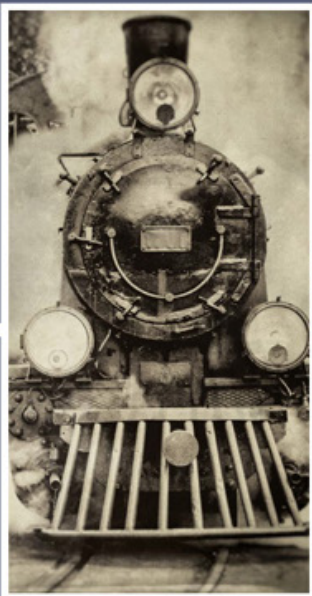
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The Fourth Industrial Revolution

With each new technological advancement, the new jobs that are created outnumber the old jobs that are replaced, leading to higher living standards.



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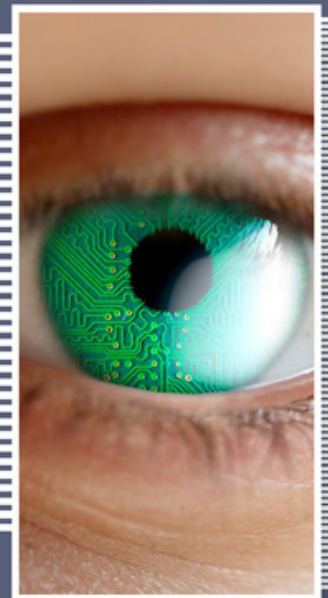
Electricity



Computing



Intelligence



**A SHORT-TERM EFFICACIOUS INTERVENTION
MAY HAVE FEW DISCERNIBLE, SUSTAINABLE
LONG-TERM BENEFITS**

— DAMBISA MOYO



PLASTIC BAG BANS MAY DO MORE HARM THAN GOOD

VINCENT GELOSO

Prime Minister Trudeau recently announced plans to ban “single-use plastics”—possibly bags, straws, and cutlery, among other plastic things. “We need to cover all of Canada with this decision,” he said, “and that’s why the federal government is moving forward on a science-based approach to establishing which harmful single-use plastics we will be eliminating as of 2021.”

Meanwhile in Ontario, the Ford government is also considering a ban on single-use plastics. Montreal Mayor Valérie Plante recently declared war on plastic, eyeing a total ban on small plastic bags distributed by grocery stores and other retailers. And in Vancouver, city council’s ban on single-use plastics will go into effect next year.

SOMEWHERE BETWEEN 12 AND 22 PERCENT OF “CARRYOUT” PLASTIC BAGS WERE REUSED AT LEAST ONCE

Internationally, many governments have adopted such bans, motivated by the belief that plastic bags are environmentally harmful. A ban on plastic bags would encourage people to shift to reusable bags, which, they reason, would help the environment.

But is that true? Let’s consider some facts.

First, plastic bags are rarely used once. A recently published peer-reviewed article showed that in California, somewhere between 12 and 22 percent of “carryout” plastic bags were reused at least once. And a recent study by Recyc-Québec, a government entity,

found 78 percent of carryout plastic bags replaced heavier garbage bags. These reuse rates raise real questions about the environmental benefits of plastic bag bans.

Second, people like plastic bags. They are quite strong and can serve as hold-alls for small items. Again, this means they often substitute for heavier garbage bags. This is an important point. Heavier garbage bags require more energy and plastic to produce relative to the volume of garbage they can carry. If consumers shift from the smaller bags to heavier ones (which remain on sale in retail stores), the ban may actually increase pollution. In California, where reuse rates are well below those in Quebec, this shift ended up offsetting 30 percent of the reduction in plastic garbage.

In Portland, Oregon, and New York state, the bans spurred a considerable increase in the use of paper bags, which are more polluting than the heavier plastic garbage bags (the only upside to paper is that it disintegrates more easily).

Third, advocates for such policies forget to account for the pollution from “cleaner” options. Remember, most reusable bags must be washed. The provision of water for that purpose requires resources—including energy. The production of energy produces greenhouse gases. Thus, an increase in the demand for water to clean bags increases the demand for energy and causes an increase in greenhouse gases. This cost must be included when calculating the net benefits of any plastic ban. At present, it’s frequently omitted.

So what to do?

Go local. If municipal governments are really interested in reducing plastic garbage, the better option is to privatize garbage collection. Most cities charge flat fees for garbage collection or the cost is simply included in household tax bills, providing no incentive to cut down on trash. On the other hand, cities that privatize garbage collection tend to price garbage based on the volume produced. In those cities, there's been a reduction in the amount of garbage produced by residents—due in part to retailers adapting and using less packaging.

Vincent Geloso, Fraser Institute Senior Fellow, is a visiting professor of economics at Bates College (Lewiston, ME) and earned his PhD from the London School of Economics. Previously, he was postdoctoral fellow at Texas Tech University and earned his undergraduate degree from the University of Montreal.



Such a solution would be more viable than such heavy-handed policies as banning plastic bags, which may end up doing more harm than good. ♦



The Essential and Importance of **ADAM SMITH**

JAMES OTTESON

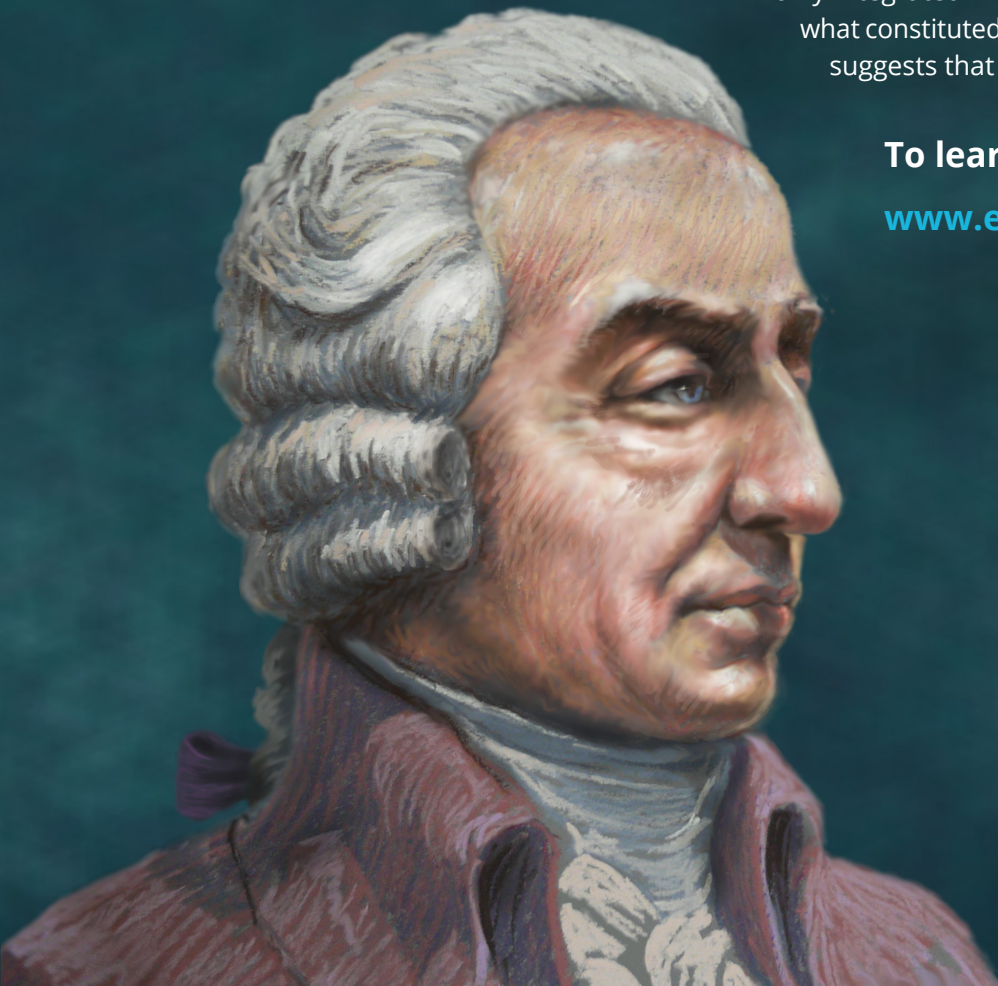
Adam Smith (1723 – 1790) is widely hailed as the founding father of economics. He wrote only two books, but the number of topics and ideas covered is vast. This book introduces Smith's most important ideas and gives readers some appreciation of both the depth and the breadth of his thought, which are as applicable today as they were in the late 1700s when he originally wrote them.

Can we engage in economic transactions while maintaining our morality? Must we give up on our morality in order to become rich? As our world becomes increasingly integrated by trade, finance, and commerce, these questions become all the more pressing. As current as such questions are, they were already explored by Adam Smith in the eighteenth century.

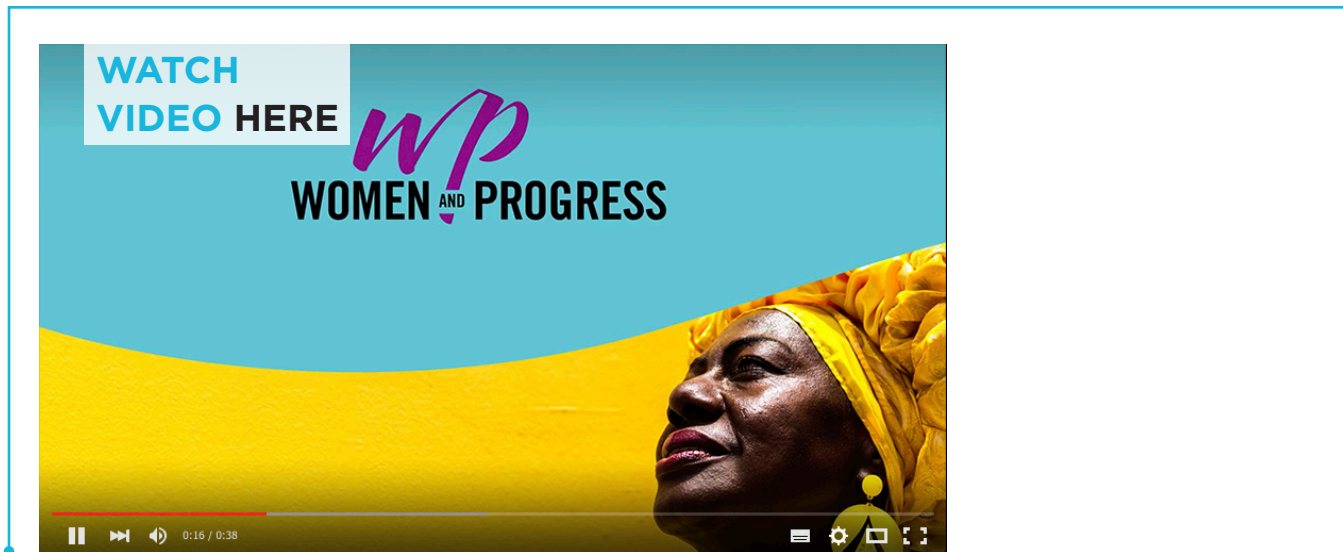
Smith offered a framework for understanding morality that not only integrated market transactions but set parameters for what constituted acceptable transactions. Modern research suggests that Smith was astonishingly accurate.

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