Discuss the evidence on whether globalisation and increased international trade has contributed to the increase in the labour market inequality observed in the United States (2000 words)

Since the late 1970's to present the labour market inequality in the United States has been increasing. The most rapid growth of wage inequality observed, was in the 1980's (Autor *et al* ,2006). Whilst there is much evidence that suggests globalisation and the increase in international trade has contributed to labour market inequality, these are not the only factors which can explain the growth in equality in the US economy. There are many other factors which are acknowledge in the literature that have contributed to the growth in the inequality such as; the supply of skilled workers relative to unskilled workers, skill-biased technology changes which benefit the high skilled workers and disadvantage the low skilled workers, the movement from manufacturing to the provision of services, and the de-unionisation of the US economy (Bound and Johnson, 1992; Borjas and Ramey, 1995; Feenstra and Hanson, 1996, 1999; Autor, Katz and Kearney, 2006; Borjas, 2013)

Globalisation is the process of the world becoming increasingly interconnected. It involves increased integration and interdependence of national economies by, increased international trade, immigration, increased inward investment and the increased role for global multinational companies. Globalisation has been evolving for hundreds of years but has sped up dramatically over the last half a century. There is much literature that suggests globalisation and international trade, particularly with low-wage countries, has coincided with the increase in the labour market inequality (Borjas and Ramey, 1995; Feenstra and Hanson, 1996, 1999; Wood, 1998).

Since WWII the US has exported more than it has imported. The goods that are imported are usually not what is exported. Workers who are employed in the importing industries tend to be less educated compared with the highly educated workers who are employed in the exporting industries. The rise in globalisation and international trade has seen exports in the US economy increase by less relative to the increase in imports. This benefits the skilled workers and disadvantages the unskilled workers. When foreign consumers increase their demand for US produced goods, the demand for skilled workers increases (because the skilled workers are employed in exports). The domestic firms then reduce hiring of lower educated workers as the goods they produce, are produced and imported from abroad at much lower costs (Borjas, 2013). Therefore, increased imports and exports are damaging to the relative wages and employment of the low skilled workers in the United States.

Globalisation increases the competitiveness of markets as there are negligible trade barriers. Borjas and Ramey (1995) use a theoretical framework based on time series results to investigate the link between the returns to education and foreign competition in concentrated industries. Industries that produce durable goods in the US are often highly concentrated, there tend to be more low-skilled workers employed, and the industry receive significant returns that they share with their employees by paying them higher-than-average wages (Borjas 1995). Therefore, increased imports of these goods reduces the profits of the domestic firm and thus, the relative wage of less educated workers also decreases. Borjas and Ramey (1995) find when there is increased foreign competition in highly concentrated domestic industries there is a larger loss of profits which translates to a large decline the relative wages of low-skilled workers. Their model concludes, the net imports of goods produced in concentrated markets have a much larger impact on the relative wages of the low-skilled workers, compared to the net imports of goods produced in competitive markets. Therefore, when the industry is more concentrated the impact on the wage inequality is greater.

Outsourcing, meaning the import of intermediate inputs by domestic firms, has also contributed to an increase in the relative demand for skilled labour in the US. Feenstra and Hanson (1996) find if firms respond to import competition from low-wage countries by moving non-skill-intensive activities abroad, then trade will shift employment towards skilled workers within industries. They contrast industry-by-industry estimates of outsourcing from 1972-1990 and examine if outsource has impacted the demand for skilled-workers. They find outsourcing can account for 31-51% of the increased in relative demand for skilled workers in US manufacturing industries during 1980's.

From the brief literature discussed, it is clear that globalisation, in particular international trade, has considerably contributed to the labour market inequality through the increased demand for skilled labour. Higher demand of skilled labour drives up the price of this supply and therefore, the relative wages of low-skill, low-educated workers has decreased over the past few decades. However, increased international trade is not the full story of growth in labour market inequality.

In recent years there has been an increase in the relative supply of skilled workers. The wages of low-skilled workers have been falling since the 1980's compared to wages of high-skilled workers. Although globalisation and increased international trade has contributed to the growth of labour market inequality, there are many other factors that cannot be overlooked, such as; education level of workers, skill-biased technology changes, the decline in the provision of goods for increased provision of services and the de-unionisation of the US economy, are among the few factors that have contributed to the explanation of the labour inequality.

The widened gaps in the wages and employment rates of skilled and unskilled workers are evidence that the demand for skilled workers has been increasing in the last century, relative to the total labour demand. More employment of high-skilled workers generates higher income (increased demand drives prices upward) this gradually shifts the supply curve of educated workers outwards as the budget constraints of household are increased due to higher income. In other words, households had more money to invest in their children or spouse's education. Now the supply of skilled workers has increased, the demand for skilled workers also increased (shifts outwards). This cycle continues, increased employment of skilled workers creates opportunities to hire even more skilled workers by inducing skill-using technical progress (new products, new processes and new forms of work organisation)(Wood, 1998). From this cycle, Wood (1998) suggests that the responsiveness of the demand curve to shifts in supply is much lower than the responsiveness of the supply curve to shifts in the demand. In other words, when there is increased demand for skilled labour there is a relatively quick response of the supply of skilled labour.

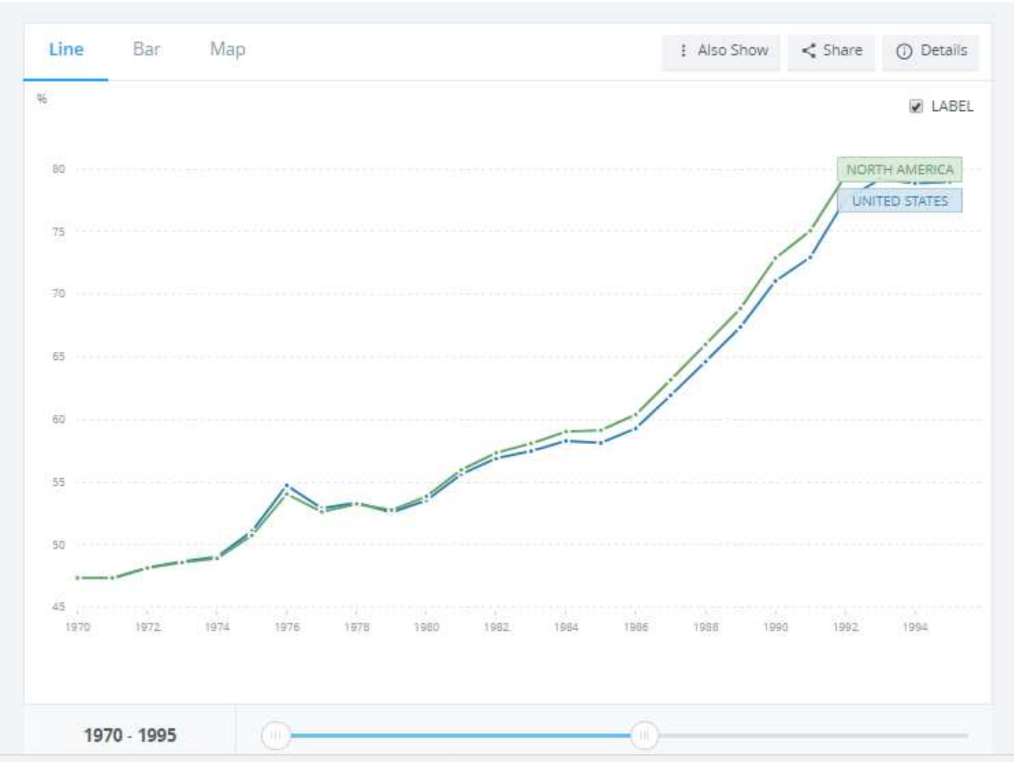

Figure 1(World Bank Group, 2018) The figure shows gross enrolment ratio, tertiary, both sexes (%). Generally, the enrolment is increasing from 1980 onwards, however, 1978-1980 there is a slight decline. Also, tertiary enrolment slightly slow down from 1982 – 1985 and then increases rapidly from 1985 onwards.

Many researchers have argued that skilled biased technological changes can explain most of the growth of wage inequality. It is argued the technological advances made in the 1980's and 1990's benefited the higher skilled workers and had an adverse effect on low skilled workers (Autor *et al*, 2006). The increased demand for skilled workers, from skill-biased technology changes paired with the slowdown in the supply of college workers at the time, can help to explain the labour market inequality (Bound and Johnson, 1992; Borjas and Ramey, 1995; Autor *et al*, 2006).

Feenstra and Hanson (1999) evolve their previous work, to investigate the two widely cited explanations for the rise in wage inequality; skill-biased technological changes and trade with low-wage countries. They believe that the technological changes, largely associated with the increased use of computers during 1980's and 1990's, is the more dominant explanation. From their theoretical model they find that technological changes explain twice the impact on wages of nonproduction workers as outsourcing does. In other words, the labour inequality in the late 20th century was impacted less by the increased international trade (outsourcing) and more by the skill-biased technological changes which benefited the high-skilled workers and was consider a good substitute for low-skilled workers (Autor *et al*, 2006).

Technological advances that were introduced into labour markets, such as computers, were considered good substitutes for unskilled workers and complemented the skills of highly educated worker (Borjas 2013). For example, machines that build cars replaced low-skilled workers, but the machinery requires a high skilled worker to operate it. Technical advances therefore, lower the demand for unskilled workers and increases the demand for high skilled works. Consequently, increased demand for high-skilled workers increases their wages relative to those of low skilled workers. This contributes to the growth in the wage differentials of high and low skilled workers. This phenomenon can explain a significant amount of the increase in the labour market inequality of the US (Bound and Johnson, 1992).

Autor *et al* (2006) consider the widening inequality in the US economy is due to the increased demand for skilled workers because of skill-biased technological changes coupled with the stunted growth of relative supply of college workers. During 1980's and 1990's the employment of workers polarized, into the clear divide of high and low skilled workers at the expense of "middle-skilled" workers. Autor *et al* (2006) find technological changes contribute to these trends. Especially the declining real price of computing power. Although they are considered *good* substitutes, computers do not substitute directly for the lowest-skilled workers. Instead they displace a set of "middle-skilled" routine tasks. This lowers the relative wages of middle-skilled workers and increases the wage of high-skilled workers (Autor *et al*, 2006). They conclude over the last 25 years there has been a secular rise in upper-tail inequality with compression of lower-tail inequality. This is due skill-biased technological changes generate the outward shift of the relative labour demand, which also alters the distribution of skills required for certain jobs.

The institutional changes in the US can also help to explain the growth in labour market inequality. In 1973 24% of the workforce was unionised compared to 12% of the workforce in 2006 (Borjas 2013). Unions in the US typically represent low-skilled workers, without college degrees. The declining unionisation is correlated with lowered demand for lower-skilled workers and more workers investing in education. The minimum wage provides a safety net for the low-skilled workers, the unions typically protect the minimum wages of lower-skilled workers. In the US from 1981 to 1990 the relative minimum wage was declining. With lessened unionisation the protection of minimum wages was limited, allowed relative minimum wages to increase which significantly impacted the growth of labour market inequality in the US.

Since the 1980's the industrial mix of the US economy has shifted from manufacturing to the provision of services (Borjas and Ramey, 1995). Low-skilled workers tend to work in manufacturing compared to high-skilled workers who tend to be employed nonproduction jobs (Feenstra and Hanson, 1999). Therefore, the increase in the provision of services requires less low-skilled workers and increases the employment of higher-skilled workers (Borjas and Ramey, 1995). Workers with low skills and less education have experiences large declines in their demand and therefore, their earnings (relative to high-skill workers). Consequently, this has also contributed to the exacerbated growth of labour market inequality in the US.

In conclusion there is no one factor that can explain the growth of the inequality in the labour markets of the US economy. Globalisation increased international trade combined with; skill-biased technology changes, adjustment in labour markets supply and demand of workers, the de-unionisation of the labour markets and the increased provision of services, can all help to explain disparity in the labour markets. Arguably the most important of the elements that contributed to labour market inequality was the skill-biased technological changes, such as the introduction of computers which considerably replaced low and middle skilled workers, along with the increase in college graduates entering the labour markets. Both factors, potentially enabled the increased globalisation and international trade, which then exacerbated the situation. These were perhaps the catalyst for the de-unionisation of the US markets and that, in term, meant protection of the minimum wages of low-skilled workers was limited. Therefore overall, the 'domino effect' of the growth in labour market inequality began with skill-biased technology changes.

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