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Education and Addition of Women To the Iranian Workforce:

A Source of Economic Growth

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Although the Islamic faith preaches that women are equal to men, cultural beliefs by male elitists in Iran have led to the restriction of the status of women. This "oppression" of women not only has created an inequitable society, but it also has had a detrimental economic impact on Iran. With the current economic situation, Iran should not look for new means to exhaust their land, labor, or capital. Instead, the government should recognize that Iran could achieve economic growth through education and addition of women to their workforce.

To further support this thesis, it is essential to examine a theoretical model separated into two distinct parts: addition of new labor to the workforce, and increased education of the workforce, both of which function as a means towards economic growth. With an addition to the workforce, we can clearly see an increase in labor. As a result of this increase in labor, the economy experiences economic growth. This can be shown through an examination of the Production Possibility Frontier.

The Production Possibility Frontier, otherwise known as the PPF, is a plot of the possible levels of two goods when a society is utilizing all of its resources. Therefore if the production in an economic system is on the Production Possibility Frontier, assuming that supplies of factor are fixed at one point in time, and technology is constant, then there is full employment and full use of land and capital. In other words, the economy is maximizing their output with their given resources.

This output can be mathematically derived as a function of its factors of production: land, labor, and capital. They are incorporated mathematically into the curve through the equation $Q = f(L, K, T)$. To achieve economic growth, Q must increase, usually as a result of an increase or improvement in one of the factors of production.

The focus of this paper is economic growth spurred by a change in labor, whether it is addition of labor, or improvement in quality of labor. Clearly the addition of labor piece is relatively fundamental. An increase in labor ($L \rightarrow L_1$) will lead to increased Q , a shift outwards on

the PPF curve and thus economic growth. Even if the level of education were to remain unchanged, any increase in labor would become a source of economic growth.

Even though this is true, education still presents itself as a means of achieving economic growth. Education's main purpose is to act as a mechanism with which to increase human capital, or human worth in an economy. It accomplishes this in many ways. Education serves mainly as a means to cultivate potential into knowledge and skills that are more useful and applicable to job situations. The capabilities of the society can never be fully realized without being found and cultivated. As result of cultivating and honing one's skills, an individual becomes more efficient and more productive. As a result education leads to increased production and increased income for the worker himself. Increased and more efficient production is the basis for economic growth.

Education also provides people with the ability to conform to changes in job opportunities associated with economic growth. Someone with 8 years of schooling, versus one with four will be more apt in adjusting to changes in the job market. Therefore, if a country were to experience economic growth, having more educated people in the workforce would lead to greater maintenance of the growth, and possibly even an increase in growth. With just an increase in labor, workers are less able to move around the job market making it more difficult to sustain the economic growth. An example of this is the shift from manual plows to the use of tractors in an agricultural economy. Rather than just increasing the number of individuals using plows, educating them on the use of tractors makes them more efficient, and also more prepared to operate other machinery, such as combine harvesters. Thus education leads to not only more efficiency, but also greater adaptability in future cases when a greater demand needs to met.

Clearly, education provides individuals with more skills, and thus greater worth in the economy. However, this education does come at a cost. This leads to the major insight of human capital as a means for economic growth. One of the major focuses of human capital

theory is the rate of return of an investment in the workforce. Even though training cuts into the period of actual practice and reduces the positive earnings, it still is generally more income producing than entering the workforce without an education.

Consider one earnings flow $x_0(t)$ which is the earnings flow of an individual who enters the workforce directly out of high school. The other earnings flow is $x_1(t)$, or that of one who is expected to continue and graduate from college. Typically, $x_0(t)$ is greater than $x_1(t)$ in the short term (during the period of college attendance). However in the long term, $x_1(t)$ is generally larger than $x_0(t)$. If we create the equation $z(t) = x_1(t) - x_0(t)$, where $z(t)$ equals earnings, it generally shows a systematic pattern of early negative values, and then increasing positive values. This indicates that education leads to increased income in the long term.

This new earning potential or increased income is an essential economic benefit that leads to economic growth. GDP or Gross Domestic Product equals Consumption + Investment + Government Spending + (Exports - Imports). With the increase in income, comes an increase in consumption. This increase in consumption is directly proportional to increases in GDP, thus equaling economic growth.

Through our theoretical model we have established three primary ideas. First of all, an increase in labor, regardless of educational background will lead to greater production and economic growth. Secondly, education and investment in human capital leads to greater efficiency, productivity, and maintenance of economic growth. Finally, education leads to increases in income, with leads to increases in consumption, and thus GDP. Clearly, the education and addition of new individuals to the workforce leads to economic growth.

Iran is a country that could clearly apply this theory to get itself out of economic turmoil. What seemed to be a jubilant beginning for the country in 1979, has turned out to be an economic nightmare. Before 1979, under the Pahlavi regime, Iran was looking towards a more liberalized economy; one that wasn't too dependent upon the Islamic tradition. The major difference was greater freedom for all Iranian citizens, especially for women. However,

rumblings in numerous cities about the radical change led to a revolution and a reinstatement of the traditional Shiite Islamic faith. Led by a flamboyant fundamentalist, Ayatollah Ruhollah Khomeini, the Iranian revolutionaries took over and forced the usurpation of the Pahlavi regime. Immediately after the take over, the Shiite Islamic tradition was restored creating detrimental economic effects almost instantly.

The instatement of the Shiite tradition did not allow the continuation of various western principles that could have been very beneficial. Education only up to the age of ten was made compulsory. This lax in the educational system has created a shortage of teachers and schools. Also, the enrollment in institutions of higher education has also become increasingly low. Of the 9.9 million pupils who attend primary school, only 550,000 attend vocational schools, or universities. The greatest reduction of students is in women, who have been forced into more traditional roles. In 1994, only 24% of pupils in institutions of higher education were women.

Women were also incredibly oppressed socially and in the work place. Women were prohibited from working in most occupations. Most women worked in the home, or for the family business, but usually did nothing that helped further economic development in the country. Therefore, only 9% of women in 1997 actually held jobs of some sort in the Iranian workforce.

But perhaps the most detrimental event for women and the Iranian economy was the Iran-Iraq war. Iran was experiencing its most growth through the petroleum industry. However due to the Islamic Revolution, the decline in oil prices, and especially the Iran and Iraq war, economic activity was incredibly dampened. The worst effect was that it left thousands of women widowed. With no means of generating income, these women entered a poverty stricken lifestyle that greatly hindered economic and social development.

In order to stimulate the economy, and escape this economic turmoil, Iran will need to break away from two of its Islamic traditions: addition of women to the workforce, and the extension of a more westernized educational system for these women. Clearly, Iran is utilizing a vast majority of the men in the country, but not making use of the women. As seen in our

evidence, 76% of students in schools of higher learning are males. By adopting the following economic policy of educating and adding women to the workforce, Iran can finally achieve economic growth. The policy will hopefully initiate some economic growth almost instantly, but will also be extremely beneficial in long term.

The primary and most important step is the abolishment of the pervading Shiite Muslim tradition. It is impossible to further the Iranian economy with the existing social and cultural implications. Therefore the removal of a single religious and political leader is integral to Iran's economic success. Iran needs to begin adopting a more westernized economic system that was attempting to come into existence before the Islamic revolution. The instatement of such an economic system would be the first step towards economic development.

Once Iran has accepted a more westernized system, it will need to obtain funds from different sources, i.e. the IMF, the US, and other developed countries. Foreign relations have already begun to take shape, and need to proceed if Iran is even going to be able to fund any part of this new policy. Also by eliminating aspects of the Shiite tradition, other countries will feel that Iran is more stable, and will be more willing to interact with country that has adopted an economic system closer to home.

One of the larger economic industries in Iran is the manufacturing of textiles, such as cotton, wool, and silk. Women who worked in the house are already very skilled at this trade. Therefore, Iran could achieve almost immediate economic growth by giving women jobs in the textile industry. As we could see by the PPF curve, an increase in labor in the textile sector would lead to increased production, and thus almost immediate economic growth. Thus through an immediate addition of women to the workforce, Iran can already have some form of economic growth.

With the collected funds from its improved foreign policy, Iran can then begin to instate its education policy that will result in economic growth in the long term. The first step is to provide enough schools and teachers for the entire country. As a now, a shortage of schools

and teachers exists. Secondly, Iran must forego the Shiite tradition of limited education. Instead of making schooling up to the age 10 compulsory, Iran should make schooling through high school compulsory. Then, girls should be allowed and encouraged to attend these schools in order to further their own worth or human capital.

For all the women who are not able to attend the normal school system, they should have the option to enter government provided vocational schools to further their skills in a certain trade and hopefully earn a sufficient income. For those in poverty who had to resort to desperate means for survival before, they will finally be able to enter a trade and become a useful and productive member of the society.

As our theory pointed out, through this rampant modification of the educational system, Iran will be able to achieve economic growth. Although the initial investment will be quite drastic, the rates of return once the women are educated will be well worth the cost. When such a large number of educated women enter the workforce, L will shift to a huge L_1 signifying huge economic growth. Also, the increase in personal income will also lead to rises in consumption. Those women who were poverty stricken before, will now be able to provide for themselves, and will thus add to the exchange in the country. This huge increase in consumption will increase the GDP and therefore lead to economic growth as well.

As we can see through our analysis and implementation of the following policy, Iran can definitely achieve economic growth through the addition and education of women to the workforce. Serious measures do need to be taken. Iran can no longer have such a conservative and fundamentalist system of government in power. Instead they need to reduce the conservatism of their current system, mainly by relieving the oppression upon the women, and allowing them to become productive members of society. Once this new system is put in place though, the Iranian economy will experience incredible economic growth. As the theory indicates, Iran must continue to add more educated women to the workforce regardless of the initial investment, because the eventual return for doing so will be far greater.

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