



Faculty of Commerce
Department of Economics

The Effect of the Minimum Wage on Employment and Inflation in Egypt

A doctoral dissertation

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The Committee has approved this dissertation as a partial completion of the requirement for the doctorate Degree in Economics

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿ قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ

الْعَلِيمُ الْحَكِيمُ ﴾

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Abstract

The main goal of this dissertation was to assess the impact of raising the minimum wage on employment and inflation in Egypt. Standard Neoclassical theory suggested that minimum wages would negatively affect the employment of low wage workers. However, some empirical studies have found insignificant or positive employment effects. There are several potential justifications for these empirical results including price-pass-through effects.

We first analyzed the feasibility of assessing minimum wage employment and inflationary effects based on historical data. We found that the existing minimum wage system is ineffective for both private sector and government employees. We concluded that the official national minimum wage rate is not binding and cannot be used as an independent variable in an ex-post regression analysis. We suggested a new framework for minimum wage determination and proposed three hypothetical hourly minimum wage rates. Using micro-data from Egypt's Labor Force Survey (2013), we projected the hourly wage distribution for regularly and irregularly employed workers in 2016. We found that more than 50% of our minimum wage workers were employed by the private sector and were not covered by a legal contract or social insurance.

Assuming full compliance, our results suggest that a minimum wage of 8.6 L.E./hour would result in a decline of 16.4% in regular minimum wage jobs in the private sector. This represents around 9.8% of total regular minimum wage jobs, and 3.2% of total regular employment. When the minimum wage is increased to 9.3 L.E./hour and 10.6 L.E./hour, around 16.5% and 17.7% of regular minimum wage jobs are expected to be lost, respectively. Assuming partial compliance due to

absence of formal contracts, we conclude that the negative employment effects will not exceed 1.4% of total regular employment. Finally, we used industry-level panel data on producer prices, average wages, intermediate consumption and worker productivity to estimate the effect of wages on the price level. Assuming mark-up pricing, our results have shown that the three proposed minimum wage rates are expected to increase the average annual producer price index by 0.77% to 1.52%. Our predictions are in line with estimates from other developing countries.

Our study suggests that the National Minimum Wage Council must redesign the existing minimum wage setting mechanism, especially for private sector workers. We also recommend a regular update of minimum wage rates given economic conditions and feedback from follow-up studies and public consultations. Greater efforts are also needed to improve work conditions for low wage workers.

Keywords: Minimum wage, Employment, Inflation, Egypt.

Introduction

Introduction

(1) **Problem definition**

From the political point of view, minimum wages have a great appeal. This is because they can be used as policy tools for income redistribution and poverty reduction. However, there is much controversy about the effectiveness of minimum wage regulation in improving the welfare of low income people. One reason for this controversy is its potential effects on employment and inflation. Another problem is non-compliance to minimum wage regulation in the informal sector, especially in developing countries.

Proponents of the minimum wage argue that it is a useful tool for redistributing income because it increases low skilled workers wages at the expense of other factors of production such as higher skilled labor or capital. On the other hand, opponents of the minimum wage policy claim that it may create involuntary unemployment and hence worsen the welfare of workers who lose their jobs because of the minimum wage.

Most of the minimum wage debate revolves around positive economic questions that explore the impact of such policy on employment, wage distribution, prices, productivity, business competitiveness, poverty, etc. However, it should be noted that normative economics forms an important part of this debate as well. In order to guarantee a minimum standard of living for the low paid workers, society faces tough choices because some of those unskilled workers might lose their jobs. Moreover, young people may find it harder to get a new job as a result of such policy. In these cases, it might be argued that minimum wages laws restrict a person's "right to sell his labor" at any price and thus represent a violation of "the freedom of contract".¹ Some countries have introduced lower minimum wage rates for younger workers to encourage their employment. Again, a normative question arises: "Is it fair for younger people to earn less for the same work?"

In order to answer the positive questions, scholars around the world have tried to quantify the economic effects of minimum wages through empirical investigation. However, researchers encounter several practical

¹ *Adkins v. Children's Hospital of D. C.*, 261 U. S. 525 (1923).

problems in this endeavor. Liu and Wu (1999)² identify five difficulties in studying minimum wage effects: the absence of relevant statistics, the difficulty of separating minimum wage effects from other influences on economic variables, time lag in minimum wage effects, difficulty in identifying chain effects on inflation and competitiveness, and finally the consideration of differences in policy contexts such as legal coverage, effectiveness of enforcement, labor market characteristics, relative size of the minimum wage as well as prevailing economic conditions.

The literature that investigated the impact of minimum wages on employment and wages of low skilled workers is extensive.³ However, empirical research has not come to a clear and definitive conclusion about the effects of minimum wages on employment and inflation.

Raising the minimum wage level has been one of the primary demands of Egyptian workers and unions. Economists have been skeptical about the potential effects of such a move on macroeconomic variables such as the public deficit, inflation and employment. Few Egyptian studies have tackled the minimum wage issue from an economic perspective. Our research aims to fill in the gap in the literature on minimum wage employment and inflationary effects in Egypt.

(2) Research Objectives

The purpose of this research is to assess the potential impact of raising the national minimum wage level on employment and inflation in Egypt. In order to realize this broad objective, we plan to tackle the following research issues:-

1. Assess the feasibility of an ex-post estimation of minimum wage effects based on historical official minimum wage rates.
2. Suggest several scenarios of national minimum wage rates based on specific economic criteria.
3. Analyze the wage structure in Egypt and how it would be affected by the proposed minimum wage.
4. Estimate the employment effects of raising the national minimum wage to the proposed rates (under different scenarios of compliance).
5. Estimate the inflationary effects of raising the national minimum wage to the proposed rates.

² E. Liu and J. Wu, Minimum Wage Systems, RP08/98-99, Research and Library Services Division Legislative Council Secretariat, Hong Kong, May 1999, pp. 53-54.

³ David Lee, Emmanuel Saez, Optimal Minimum Wage in Competitive Labor Markets, December 5, 2007,P1

(3) Research Hypotheses

In the course of attaining our research goals, we test the following hypotheses:-

1. The mechanism of minimum wage setting in Egypt is not effective.
2. The effect of the minimum wage on employment and inflation in Egypt can be estimated using ex-post analysis methods.
3. Imposing a minimum wage that covers workers' basic family needs would have a significant positive effect on wages in Egypt.
4. Raising the minimum wage for private sector workers would have a significant negative impact on the employment level in Egypt.
5. Raising the national minimum wage would have a significant positive effect on inflation in Egypt.

(4) Research Methodology

We assessed the historical and institutional aspects of the status-quo minimum wage system in Egypt. Our assessment favored the use of an ex-ante approach over ex-post research methodologies suggested by the empirical literature. Our alternative methodology consisted of the following steps:-

1. We first calculated and proposed three levels of hypothetical minimum wage rates based on three criteria: average consumption expenditure of the first quintile, the national poverty line, and a specific proposed proportion of the national average wage. We converted the three wage levels into hourly minimum wage rates.
2. We then used *Stata* to analyze detailed micro-data from CAPMAS' *Labor Force Survey (LFS)* for 2013 in order to explore the reported wage data, devise the underlying hourly wage distribution in 2013 for regular and irregularly employed workers, and forecast the hourly wage distribution in 2016.
3. Next, we simulated the introduction of the three proposed minimum wage scenarios by raising all subminimum wages to the proposed rates. We analyzed the effect of introducing the new minimum wage rates on average and median hourly wages. Then, we calculated the fraction of workers affected by the proposed minimum wage rates and the associated wage gap.
4. Then, we analyzed the characteristics of affected minimum wage workers, including private sector workers. The results of the analysis were used to determine the expected degree of compliance to our