An Empirical Application for a Labor Market Model

by
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Abstract. The main objective of this study is to highlight some characteristics of the United States' labor market and to test the validity of a model describing labor market interconnections. The equations are part of a model which has been proven to be valid for the Romanian economy. We considered it worthwhile to test the validity of these labor-market relationships on the economy of The United States of America. The reader should be advised that this study's purpose is not, by any means, to conduct or influence policy, but merely an examination of the current economic environment, which will be continued with a more detailed approach in the future.

Key words: labor force participation rate, labor market, unemployment rate
JEL classification: J64, C13

1 Introduction

Labor market dynamics is very important for all interested parties, news from this area been able to influence markets which, at a first glance, do not have a direct link to it. In recent years, many studies regarding labor markets have been conducted, including "The long-term labor market consequences of graduating from college in a bad economy" (*Kahn, 2010*) and "Explaining changes in female labor supply in a life-cycle model" (*Attanasio et al, 2008*). One of the most renowned macroeconomic models which explains the complex relationships existent in the Romanian Economy was elaborated by the Romanian Economist Emilian Dobrescu (*Dobrescu, 2006*).

2 Methodology

In this section, we will briefly summarize the main concepts which have been used to conduct this analysis. All results have been obtained through the use of linear regression; we will thus continue by presenting the general framework.

First of all, because of the variables involved, all three equations describe key relationships for any labor market. The first equation describes the evolution of the labor force participation rate (*prap*) relative to that of the total employment (*E*) in the economy. For the USA's economy, the mathematical formula for this equation can be summarized in the following form:

$$prap_t = f(\overset{\oplus}{prap_{t-1}}, \overset{\oplus}{E_t}) \quad (2.1)$$

It is commonsense that total employment has a positive effect on overall labor participation; this equation not only satisfies this fact, but it also gives an indicator of the intensity of this relationship and information about the lag of this influence (the nonexistent lag, to be more precise).

The second equation models the relationship between the unemployment rate (*ru*) and the unit labor cost rate (*rulc*), which can be properly described by:

$$ru_t = f(\overset{\ominus}{ru_{t-3}}, \overset{\oplus}{rulc_{t-1}}) \quad (2.2)$$

When labor related costs rise more than real output, firms try to maintain profitability margins by laying off employees, so there indeed is a direct relationship between the unit labor cost and the unemployment rate. The explanation for the inverse relationship between the 3-year-lagged unemployment rates can be that high unemployment in a random period of

time forces the government (and related institutions) to take action, but structural rigidities in the labor market do not allow a quick trend reversal.
Finally, we will estimate the following equation:

$$LIE_t = f(\overset{\ominus}{LIE_{t-1}}, \overset{\ominus}{ru_t}, \overset{\oplus}{cpi_t}) \qquad (2.3)$$

for emphasizing the dependence of the labor income per employed person rate (*LIE*) on the unemployment rate (*ru*) and the inflation rate (*cpi*).
Macroeconomic theory suggests a negative dependence between the unemployment rate and the labor income per employed person rate. The explanation for this fact is that when unemployment rises, total income earned by employees is reduced. Moreover, an increase in inflation forces the employers to pay higher wages, in order to maintain constant real wages for their employees, so there indeed is a direct dependence between the inflation rate and the labor income per employed person rate.
For properly testing these dependencies, we have used six time series. The evolution of these time series has been studied for a 65 year period, between 1947- 2011, the data being gathered from both The U.S. Bureau of Labor Statistics (*BLS*) and The Bureau of Economic Analysis (*BEA*).
After the appropriate data gathering and other statistical computations (based on the definitions of the variables themselves), the first step was to determine the nature of each series, using the Augmented Dickey-Fuller (*ADF*) testing for stationary variables (*Dickey and Fuller*, *1979*). After applying the statistical test, if the null hypothesis could not be rejected, we concluded that the time series could not be stationary. In this case, we proceeded to differentiating it and then reapplying the ADF test until we obtained a stationary time series. This procedure was conducted for all variables used in this analysis.
The next step was to determine the influence that the exogenous variables have upon the endogenous variables. In order to properly estimate it, we used the OLS procedure, which resulted in a linear equation between the independent variables, on the one hand, and the dependent variables, on the other. Furthermore, the statistical inference necessitated the use of several tests, which explored some important characteristics of the estimators.
First of all, we have used the Ramsey RESET to determine whether the econometric model is linear in parameters (*Ramsey, 1969*). Secondly, the homoscedasticity property of the estimators was tested with the test developed by Halbert White (*White, 1980*) and the Jarque-Bera Test was conducted for testing the normality of the error terms (*Jarque and Bera, 1980*). In order to detect if first order autocorrelation is present in the residual terms, the Durbin-Watson statistic was used (*Durbin and Watson, 1950*); to test if the error terms presented autocorrelation of higher order, we have used the Breusch - Godfrey test (*Breusch, 1979 and Godfrey, 1978*).
Finally, other properties of the estimators were important for our analysis and their existence was demonstrated by other, simpler procedures. The Klein criterion for multicollinearity (*Klein, 1962*) and correlation matrices are just two of these methods.

3 Data description

For our analysis, we have used a series of statistical variables in order to describe some of the complex features the USA's labor market has.

3.1 Labor force participation rate

For computing the labor force participation rate (*prap*), we will introduce the following labor market statistics. First of all, the civil labor force (LF), which includes "all people constituting the disposable labor force used for producing goods and services, with the exception of the military forces and assimilated personnel" (*Anghelache et al 2007*) and, secondly, the total population over 16 y.o. (AP). Thus, the labor force participation rate is defined as:

$$\text{prap} = \frac{\text{LF}}{\text{AP}} \qquad (3.1.1)$$

The evolution of this variable can be summarized in the following graph:

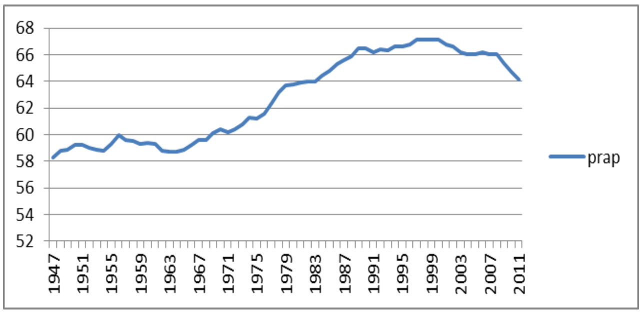

Figure 3.1. The evolution of the labor force participation rate in the USA between 1947-2011
Raw Data Source: The U.S. Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey

We can see that the labor force participation rate constantly increased between 1963 and 2000, but the 2008 crisis sent this variable to the values it had in the 1980's. In 3-4 years, it lost almost all that it had gained in more than 20 years.

3.2 Total employment

Another variable used in the analysis is total employment. Total employment is defined as "all persons – both employees and independent workers – who are involved in a productive activity in the national accounts system" (*Anghelache et al 2007*).

Using the graph below, we see that total employment constantly increased over time, although the economy has experienced alternate recessions and expansions in this period.

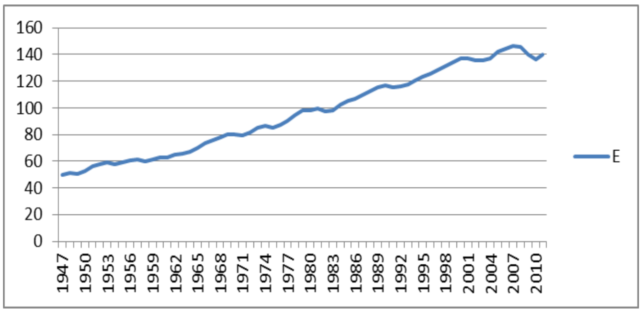

Figure 3.2.The Evolution of Total Employment in the USA between 1947-2011
Raw Data Source: Bureau of Economic Analysis, Full-Time and Part-Time employees by industry

3.3 Unemployment rate

The next variable we are going to study is the unemployment rate. Unemployed people are defined as being those who "do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work." (*Bureau of Labor Statistics*). Thus, the unemployment rate is "the share of unemployed people in the total active population" (*Anghelache et al 2007*), where total active population is represented by „all persons of each gender, older than a reference limit, who, for a specified reference period, represent the work force necessary for productive activities" (*Anghelache et al 2007*).

Big fluctuations can be seen in the evolution of the unemployment rate, peaks being experienced in 1973 (the oil crisis), 2001 (the „dot com" bubble) or in 2008 – 2011.

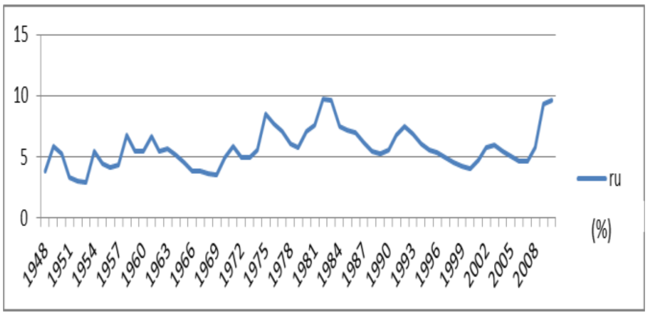

Figure 3.3. Evolution of the Unemployment rate in the USA between1947-2011
Raw Data Source: U.S. Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey

3.4 Unit labor cost rate

Unit labor cost (*ulc*) is defined as the ratio between labor income (total wage and salary accruals: *li*) and real gross value added (GVA_c) in the economy in the current time period.

$$ulc = \frac{li}{GVA_c} \qquad (3.4.1)$$

The transformation to the rate of modification is done by the usual statistical means. From the following graph, we can see that the evolution of this economic indicator for the 1947-2011 period is very different from the previous statistics. Wages (and other labor related costs) are very dependent on market conditions; although the unit labor cost has increased in these years, the rate of these increments vary a lot from year to year.

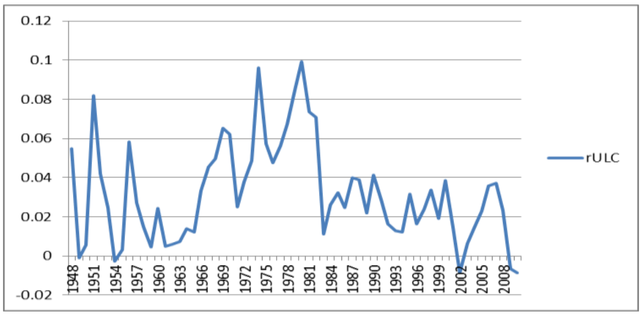

Figure 3.4. The evolution of the unit labor cost rate in the USA, between 1947 and 2011
Raw Data Source: Bureau of Economic Analysis

3.5 Labor income per employed person rate

Dividing total labor income by the number of employed people we obtain the next economic variable of interest. Labor income per employed person indicates how much money does an employed person gain, on average, from labor.
The evolution of this macroeconomic indicator suggests that labor income usually decreases when the economy is contracting, because total labor-involving costs slump even more than the number of employed population.

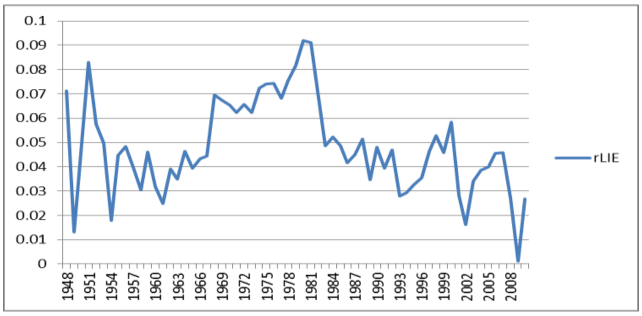

Figure 3.5.The evolution of labor income per employed person rate in the USA, between 1947 - 2011
Raw Data Source: Bureau of Economic Analysis

3.6 Inflation rate

A definition for inflation can be: "the process of significant and persistent rising price levels" (*Ţigănescu and Roman, 2005*), and a method of measuring it is by the means of the inflation rate. This economic indicator shows how much general prices have changed, compared with last year's level.
The evolution of the inflation rate in the USA was far more volatile than that of the unemployment rate. Leaving aside the 1973 and 1979-1980 periods, the inflation rate in the USA was less than 10%.

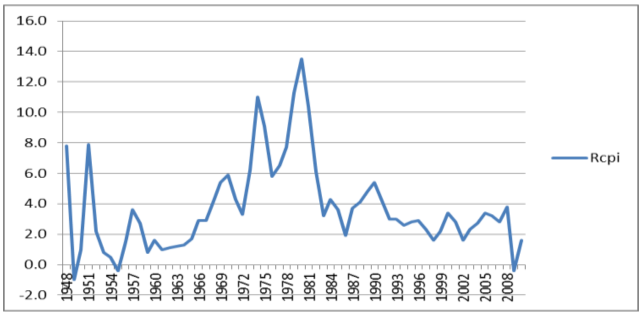

Figure 2.6. The evolution of the inflation rate in the USA between 1947-2011
Raw Data Source: Bureau of Labor Statistics, Consumer Price Index, All Urban Consumers

4 Empirical Results

This section covers the results of the conducted analysis. We will start with stationarity analysis for every variable of interest and will continue with the outputs of the OLS procedure.

4.1 Stationarity analysis

After the variables have been computed from the raw data, all variables needed to be "stationarized" for later use.
First of all, using the ADF testing for the labor force participation rate, we can observe that the computed τ statistic (which will be labeled with the τ_{comp} symbol from now on) of -1.1657 for the "random walk with drift" test, with a critical value for a 5% significance test (regarded as τ_{crt} from this point forward) of -2.908420 implies that the labor force participation rate time series is not stationary. For the "random walk with drift and stochastic trend" test, τ_{comp} has a value of -0.088039 and τ_{crt} = -3.482763; moreover, the final "random walk" test yields τ_{comp} = 0.788223, with τ_{crt} = -1.946072. From all these tests, we can conclude that the labor force

participation rate time series is, indeed, not stationary. After differentiating the data, we obtain a new time series (*dprap*) and applying the three ADF tests for this variable we obtain the following values for τ_{comp}: -4.348073 ("random walk with drift"), -4.524514 ("random walk with drift and stochastic trend"), -4.299634 ("random walk"). Comparing the new statistic with the known critical values for a 5% significance test, we can conclude that the new differentiated variable is stationary, thus accepting the alternative Dickey-Fuller hypothesis: the series does not have a unit root.

Secondly, applying the ADF test to the total employment time series, we will obtain the following values for τ_{comp}: 0.497672 ("random walk with drift", the 5% critical value τ_{crt} = -2.909206), -3.852570 ("random walk with drift and stochastic trend", τ_{crt} = -3.482763), 3.986802 ("random walk", τ_{crt} = -1.946161). This variable is, once again, not stationary, so we proceed to differentiating it and reapplying the ADF test for the new, differentiated variable (*de*). We thus obtain the following values for the computed τ_{comp} statistic: -6.674622 ("random walk with drift"), -6.628638 ("random walk with drift and stochastic trend"), -3.840694 ("random walk"), and taking into consideration the preceding critical values for these tests, we can say that the new variable is stationary, accepting the alternative hypothesis of the Dickey-Fuller test: no unit root is present in this series.

Thirdly, the τ_{comp} statistics for the unemployment rate time series have been identified to be: -2.888880 ("random walk with drift", the 5% critical value τ_{crt} = -2.910019), -3.292830 ("random walk with drift and stochastic trend", τ_{crt} = -3.485218), 0.016954 ("random walk", τ_{crt} = -1.946161). Thus, the series is not stationary, and we proceed to differentiating it. The ADF tests for the new variable yields the following τ_{comp} statistics: -7.231663 ("random walk with drift"), -7.238655 ("random walk with drift and stochastic trend"), -7.277320 ("random walk"). This new variable is stationary, indicating a true alternative Dickey-Fuller hypothesis.

Moreover, the ADF tests for the unit labor cost rate yield the following τ_{comp}: -3.909300 ("random walk with drift", the 5% critical value being τ_{crt} = -2.909206), -3.928779 ("random walk with drift and stochastic trend", τ_{crt} = -3.483970), -2.541902 ("random walk", τ_{crt} = -1.946161). As indicated by these tests, the unit labor cost rate is stationary: enough proof exists in order to reject the null hypothesis.

Furthermore, the results from the ADF tests for the labor income per employed person rate are the following: τ_{comp} = -3.652659 for "random walk with drift" (τ_{crt} =-3.483970), τ_{comp} = -3.721535 for "random walk with drift and stochastic trend" (τ_{crt} =-2.909206) and τ_{comp} = -1.559041 for the "random walk" test (τ_{crt} =-1.946161). This time series is not stationary, and after differentiating it, we will obtain the following values for τ_{comp}: -10.54603 ("random walk with drift"), -10.57447 ("random walk with drift and stochastic trend"), -10.66249 ("random walk"). This new series does not have a unit root, so it is stationary.

Finally, for the inflation rate statistic, we obtain the following values for τ_{comp}: -1.936243 ("random walk with drift", 5% critical value τ_{crt} = -2.910860), -1.898308 ("random walk with drift and stochastic trend", τ_{crt} = -3.486509), -1.109655 ("random walk", τ_{crt} = -1.946348). Differentiating and reapplying the ADF tests: -9.093090 ("random walk with drift"), -9.028381 ("random walk with drift and stochastic trend"), -9.171749 ("random walk"). This new time series is stationary.

Thus, for parameter estimation, all variables (except the unit labor cost rate) have been used in their "differentiated form".

4.2 Results of the OLS procedure

After all variables have been stationarized, we will use the OLS procedure to conduct a regression analysis for all three endogenous labor market statistics.

4.2.1 Modeling the labor force participation rate

As we have previously mentioned, the first equation models the relationship between the labor force participation rate (*prap*) and the total employment (*E*) and the regression analysis has indicated the following linear equation:

$$\widehat{prap}_t = 0.380 \times prap_{t-1} + 0.063 \times E_t \quad (4.1)$$

with the output being summarized in the following table:

Table 4.1. Regression results for (4.1)

Var	Coeff	Std. Dev.	t-Stat	Prob.(t-Stat)
$Prap_{t-1}$	0.380379	0.101588	3.744316	0.0004
E_t	0.063031	0.014365	4.387829	0.0000
R^2		0.417383		
Durbin-Watson statistic		1.996887		

Source: Author's own estimates

According to the following Ramsey RESET Test, this first equation is linear in its parameters:

Table 4.2. Ramsey RESET results for (4.1)

Ramsey RESET Test			
F-statistic	0.820355	Probability	0.487919
Log likelihood ratio	2.618067	Probability	0.454331

Source: Author's own estimates

Moreover, both the Durbin-Watson statistic and the Breusch-Godfrey LM test indicate that the error terms are not serially correlated.

Table 4.3. Breusch-Godfrey Serial Correlation LM Test for (4.1)

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.543612	Probability	0.583527
Obs*R-squared	0.000000	Probability	1.000000

Source: Author's own estimates

The Klein Criterion indicates that between the independent variables there is no multicollinearity ($R^2_{prap(-1)=f(employment)} = 0.046715 < 0.417383 = R^2_{prap=f(prap(-1),employment)}$ and $R^2_{employment=f(prap(-1))} = 0.046715 < 0.417383 = R^2_{prap=f(prap(-1),employment))}$ and, furthermore, with a JB statistic of 0.811, the residual series is normally distributed, according to the Jarque - Bera normality test. However, the results of the White test indicate that the error terms of this model are heteroscedastic.

4.2.2 Modeling the unemployment rate

The second equation links the unit labor cost rate (*rulc*) with the unemployment rate (*ru*); after applying the OLS procedure, the equation takes the form:

$$\widehat{ru}_t = -0.252 \times ru_{t-3} + 0.076 \times rulc_{t-1} \quad (4.2)$$

as indicated by the following output:

Table 4.4. Regression results for (4.2)

Var	Coeff	Std. Dev.	t-Stat	Prob.(t-Stat)
ru_{t-3}	-0.252402	0.127704	-1.976465	0.0529
$rULC_{t-1}$	0.076583	0.031689	2.416710	0.0189
R^2		0.132494		
Durbin-Watson statistic		1.893449		

Source: Author's own estimates

Although the unemployment rate input is statistically insignificant at a 5% level, because the probability of coming a type I error is still very small, we will consider that it is statistically significant. The equation is linear in its parameters, as indicated by the Ramsey RESET test:

Table 4.5. Ramsey RESET results for (4.2)

Ramsey RESET Test:			
F-statistic	1.103154	Probability	0.364564
Log likelihood ratio	4.791418	Probability	0.309376

Source: Author's own estimates

and the residual terms are not correlated, according to both the Durbin-Watson statistic and the Breusch – Godfrey LM test:

Table 4.6. Breusch-Godfrey Serial Correlation LM Test for (4.2)

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.646421	Probability	0.527851
Obs*R-squared	0.120614	Probability	0.941475

Source: Author's own estimates

Furthermore, there is no multicollinearity between the exogenous variables, as indicated by the Klein criterion: : $R^2_{ru(-3)=f(rulc(-1))} = 0.000324 < 0.132494 = R^2_{ru=f(ru(-3),rulc(-1))}$ and $R^2_{rulc(-1)=f(ru(-3))} = 0.000324 < 0.132494 = R^2_{ru=f(ru(-}$

3),rulc(-1)). However, the results of the White test indicate that the error terms of this model are also heteroscedastic; in addition, according to the Jarque-Bera test, they are not normally distributed.

4.2.3 Modeling the labor income per employed person rate

The second equation has 3 inputs: the labor income per employed person rate (*rLIE*), the unemployment rate (*ru*) and the inflation rate (*rCPI*) and one output: the labor income per employed person rate. The estimated values for the parameters form the following equation:

$$\widehat{rLIE}_t = -0.272 \times rLIE_{t-1} - 0.482 \times ru_t + 0.286 \times rCPI_t \quad (4.3)$$

with the OLS output given by:

Table 4.7. Regression results for (4.3)

Var	Coeff	Std. Dev.	t-Stat	Prob.(t-Stat)
$rLIE_{t-1}$	-0.2721	0.0888	-3.062681	0.0033
ru_t	-0.4820	0.1370	-3.518615	0.0009
$rCPI_t$	0.2864	0.0732	3.910072	0.0002
R^2			0.449170	
Durbin-Watson statistic			1.854551	

Source: Author's own estimates

The Ramsey RESET indicates an equation also linear in its parameters:

Table 4.8. Ramsey RESET results for (4.3)

Ramsey RESET Test:			
F-statistic	1.103154	Probability	0.364564
Log likelihood ratio	4.791418	Probability	0.309376

Source: Author's own estimates

Moreover, the Durbin-Watson statistic indicates that there is no first order autocorrelation between the error terms. Apart from these, the independent variables do not exhibit any multicollinearity property (because $R^2_{rLIE_{t-1}=f(ru_t,rCPI_t)}$ = 0.011016 < 0.449170 = $R^2_{rLIE_t=f(rLIE_{t-1},ru_t,rCPI_t)}$ and $R^2_{ru_t=f(rLIE_{t-1},rCPI_t)}$ = 0.116761 < 0.449170 = $R^2_{rLIE_t=f(rLIE_{t-1},ru_t,rCPI_t)}$ and $R^2_{rCPI_t=f(ru_t,rLIE_{t-1})}$ = 0.121758 < 0.449170 = $R^2_{rLIE_t=f(rLIE_{t-1},ru_t,rCPI_t)}$). Finally, using the results of the Jarque-Bera test, we can conclude that there is no reason to reject the null hypothesis regarding the error terms' normality. On the other hand, the error terms are heteroscedastic and they also exhibit higher order autocorrelation.

4.2.4 Equation interpretations

The analyzed labor market model suggests that when employment rises by 1.000.000 people, the labor force participation rate rises by 0.06 percentage points, ceteris paribus; indeed, economic theory suggests that there is a positive relationship between the two indicators. When employment is at a rise, more and more people participate at conducting productive activities, and because total population over 16 years old stays relatively constant, the labor force participation rate increases. From the equation representing the evolution of the unemployment rate, when the unit labor cost rate rises by one percentage point, the unemployment rate rises by 0.076 percentage points. The two variables are positively correlated because when labor costs increase, employers will hire less people or even will fire part of the currently existing workforce.

The latter equation involves some interesting consequences. First of all, increasing the unemployment rate with 1 percentage point will result in a decrease in labor income per employed person of roughly 0.48 percentage points, ceteris paribus. This is a very logical conclusion, regarding the fact that when unemployment surges, the number of people who receive income based on their labor activities falls, so total income of employed people will also go down. But the reduction in the number of people will be smaller than the reduction of their income, so the labor income per employed person will decrease.

On the other hand, when the inflation rate increases with one percentage point, the labor income per employed person's statistic will increase with 0.28 percentage points, ceteris paribus. When prices go up on a generalized scale, labor income per employed person will also increase due to the need of maintaining equilibrium between real wages and prices of consumer goods. But labor income per employed person will be less than the average rise in prices. Thus, part of the inflation costs is attributed to the employer and part of them to the employees.

5 Conclusions

This study uses the equations from Emilian Dobrescu's model for labor markets and adapts them to be consistent with some of the United States of America's characteristics. The reasons for choosing the US in this study can be summarized in the following:

- First of all, the existence of data for a long period of time. For the Romanian Economy, the time series are too short and parameter estimation cannot be properly executed without at least 50 consecutive values for each of the used indicators.
- Secondly, we tried to compare two very different economies. The US has, from every point of view, one of the most developed economies in the world. Romania, on the other hand, is still in a transition between its prior 1989 centralized economy and today's market based requirements.
- Finally, the dynamics and correlations of the US labor market are hard to be found even in most developed economies, not to mention emerging ones.

Although the two countries have extremely different economies, the evolution of the labor market indicators are described by similar variables and laws (the unemployment rate, the inflation rate, labor income per employed person rate, unit labor cost rate, total employment and labor force participation rate).

Our analysis of this phenomenon will continue and the focus will primarily be to find methods of variable transformation for obtaining BLUE estimators (especially for solving the issue of heteroscedastic errors).

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Appendix A. ADF tests results

Variable (symbol)	Exogenous	τ_{comp}	$\tau_{crt}^{5\%}$	Prob.
Labor force participation rate (prap)	Constant	-1.165700	-2.908420	0.6841
Labor force participation rate (prap)	Constant, Linear Trend	-0.088039	-3.482763	0.9941
Labor force participation rate (prap)	None	0.788223	-1.946072	0.8807
Differentiated labor force participation rate (dprap)	Constant	-4.348073	-2.908420	0.0009
Differentiated labor force participation rate (dprap)	Constant, Linear Trend	-4.524514	-3.482763	0.0030
Differentiated labor force participation rate (dprap)	None	-4.299634	-1.946072	0.0000
Total Employment (E)	Constant	-0.497672	-2.909206	0.8841
Total Employment (E)	Constant, Linear Trend	-3.852570	-3.482763	0.0200
Total Employment (E)	None	3.986802	-1.946161	1.0000
Differentiated total employment (dE)	Constant	-6.674622	-2.909206	0.0000
Differentiated total employment (dE)	Constant, Linear Trend	-6.628638	-3.482763	0.0000
Differentiated total employment (dE)	None	-3.840694	-1.946161	0.0002
Unemployment rate (ru)	Constant	-2.888880	-2.910019	0.0525
Unemployment rate (ru)	Constant, Linear Trend	-3.292830	-3.485218	0.0771
Unemployment rate (ru)	None	0.016954	-1.946161	0.6844
Differentiated unemployment rate (dru)	Constant	-7.231663	-2.910019	0.0000
Differentiated unemployment rate (dru)	Constant, Linear Trend	-7.238655	-3.485218	0.0000
Differentiated unemployment rate (dru)	None	-7.277320	-1.946161	0.0000
Unit labor cost rate (rulc)	Constant	-3.909300	-2.909206	0.0035
Unit labor cost rate (rulc)	Constant, Linear Trend	-3.928779	-3.483970	0.0165
Unit labor cost rate (rulc)	None	-2.541902	-1.946161	0.0118
Labor income per employed person rate (rLIE)	Constant	-3.652659	-2.909206	0.0073
Labor income per employed person rate (rLIE)	Constant, Linear Trend	-3.721535	-3.483970	0.0281
Labor income per employed person rate (rLIE)	None	-1.559041	-1.946161	0.1110
Differentiated labor income per employed person rate (drLIE)	Constant	-10.54603	-2.910019	0.0000
Differentiated labor income per employed person rate (drLIE)	Constant, Linear Trend	-10.57447	-3.485218	0.0000
Differentiated labor income per employed person rate (drLIE)	None	-10.66249	-1.946253	0.0000
Inflation rate (rCPI)	Constant	-1.936243	-2.910860	0.3139
Inflation rate (rCPI)	Constant, Linear Trend	-1.898308	-3.486509	0.6431
Inflation rate (rCPI)	None	-1.109655	-1.946348	0.2397
Differentiated inflation rate (drCPI)	Constant	-9.093090	-2.910860	0.0000
Differentiated inflation rate (drCPI)	Constant, Linear Trend	-9.028381	-3.486509	0.0000
Differentiated inflation rate (drCPI)	None	-9.171749	-1.946348	0.0000