THE INFLUENCE OF SMALL BUSINESS SPREADING ON THE DYNAMICS OF THE LABOR COSTS SHARE IN VALUE ADDED GENERATED BY LEADING INDUSTRIES OF UKRAINIAN ECONOMY

Abstract. The article is devoted to empirical testing of two initial hypotheses. The first is that the small business spreading in the Ukrainian economy would contribute to changing conditions of factor incomes distribution in favor of hired workers. The second is exactly such changes in the distribution of factor incomes (which is expressed by increasing in the share of labor costs in gross value added generated by leading types of economic activity) will contribute to the social efficiency increasing of economic activity.

The processes of implementation of the potential of small business to mitigate the negative social consequences of the deterioration of the macroeconomic situation are researched in the article. The contribution of small business to the dynamics of the share of wages in the value added by main types of economic activity was determined and the compliance of the specified contribution to the potential of a small business to improve the realization of the interests of hired workers in the relations of factor incomes’ primary distribution was assessed.

The method of "weighted differences" was used for quantitative estimation of the structural shifts impact on the aggregate for both sectors of large and small business indicators. The mentioned method was transformed according to the author’s technique in order to include in the calculations the value of a qualitative indicator by the reporting period against the base period. This allows us to assess the contribution of qualitative changes, occurring in the small and large business sectors, to the dynamics of the average characteristics of the factor incomes distribution, inherent to the leading types of economic activity in the Ukrainian economy.

The obtained results did not confirm the first hypothesis and allowed to substantiate the conclusion that the spreading of small business by itself (which is not accompanied by qualitative changes in the role of human resources and improvement of conditions for its reproduction) does not allow to expect the improving conditions of employees’ access to the main source of qualification, professional and social mobility — high labor income.

Keywords: gross value added, incomes distribution, structural changes, specifics of small business, share of labor costs.

JEL Classification J39, P40, P23.

Formulas: 1; fig.; 0 tabl.; 5, bibl.; 15.
Вписок Ю. О.
к.е.н., доцент,
Хмельницький кооперативний торговельно-економічний інститут, Україна;
e-mail: yuliia.vlasiuk@gmail.com; ORCID ID:0000-0003-3134-938X

Тебенко В. М.
к.е.н., доцент,
Таврійський державний агротехнічний університет, Україна;
e-mail: tebenko1973@gmail.com; ORCID ID:0000-0002-0459-2555

Грибова Д. В.
к.е.н., Мелітопольський державний педагогічний університет імені Богдана Хмельницького, Україна;
e-mail: gribovadiana@ukr.net; ORCID ID:0000-0002-3270-2504

Біляєв С. С.
к.е.н., Мелітопольський державний педагогічний університет імені Богдана Хмельницького, Україна;
e-mail: classbmw316@ukr.net; ORCID ID:0000-0002-9827-6413

ВПЛИВ ПОШИРЕННЯ МАЛОГО БІЗНЕСУ НА ДИНАМІКУ ЧАСТИК ВИТРАТ НА ОПЛАТУ ПРАЦІ У ДОДАНІЙ ВАРТОСТІ ПРОВІДНИХ ГАЛУЗІЙ ЕКОНОМІКИ УКРАЇНИ

Анотація. Присвячено емірічній перевірці двох виходних гіпотез. Перша з яких передбачає, що поширення малого бізнесу в українській економіці здатне змінити умови розподілу факторних доходів на користь найманіх працівників. Друга — що саме такі зміни розподілі факторних доходів (що виражається через зростання частки витрат на оплату праці у складі валової доданої вартості, генерованої провідними видами економічної діяльності) сприятимуть зростанню суспільної ефективності економічної діяльності.

Досліджено процеси реалізації потенціалу малого бізнесу щодо пом’якшення негативних суспільних наслідків погіршення макроекономічної ситуації у країні. Визначено внесок малого бізнесу в динаміку частки оплати праці у складі доданої вартості за основними видами економічної діяльності та оцінено відповідність зазначеного внеску потенціалу малого бізнесу щодо поліпшення реалізації інтересів найманіх працівників у відносяних первинного розподілу факторних доходів.

Для виділення впливу структурних зрушень на загальні (за секторами великого і малого бізнесу) показники використано метод «зважених різниць», що використовується для виділення внеску процесів, що відбуваються в певному секторі (складовій частині об’єкта дослідження) у динаміку відносної характеристикі відповідних процесів за всім об’єктом дослідження. Метод трансформований за авторською методикою для того, щоб включити до розрахунків значення якісного показника за звітний, а не за базовий період. Це дозволяє оцінити внесок якісних змін, що відбуваються в секторах малого і великого бізнесу, у динаміку середніх характеристик розподілу факторних доходів за провідними видами економічної діяльності в українській економіці.

Отримані результати досліджень не підтвердили першу гіпотезу і дозволили обґрунтувати висновок, що поширення малого бізнесу (яке не супроводжується якісними змінами ролі людського ресурсу та поліпшенням умов його відтворення) не дозволяє розраховувати на поліпшення умов доступу найманіх працівників до головного джерела кваліфікаційної, професійної та соціальної мобільності — високих трудових доходів.

Ключові слова: валова додана вартість, пропорції розподілу, структурні зміни, специфіка малого бізнесу, частка витрат на оплату праці.

Формули: 1; рис.: 0; табл.: 5, бібл.: 15.
Влияние распространения малого бизнеса на динамику доли расходов на оплату труда в добавленной стоимости ведущих отраслей экономики Украины

Аннотация. Посвящено эмпирической проверке двух гипотез: распространение малого бизнеса в украинской экономике способно изменить условия распределения факторных доходов в пользу наемых работников; такие изменения распределения факторных доходов будут способствовать росту общественной эффективности экономической деятельности.

Для оценки влияния структурных сдвигов на общие по секторам большое и малого бизнеса показатели использован метод «взвешенных разниц», трансформированный по авторской методике для того, чтобы включить в расчеты значение качественного показателя за отчетный, а не базовый период.

Полученные результаты позволили обосновать вывод, что само по себе распространение малого бизнеса не позволяет рассчитывать на улучшение условий доступа наемых работников к высоким трудовым доходам.

Ключевые слова: валовая добавленная стоимость, пропорции распределения, структурные изменения, специфика малого бизнеса, доля расходов на оплату труда.

Формул: 1; рис.: 0; табл.: 5; библ.: 15.

Introduction. The results of the national economy functioning canal ways be represented as an integral result of the two sectors work: the small business sector and the sector of large and medium-sized businesses. That makes a methodological precondition for estimating the contribution of each sector to the integral overall results of national production. Such an assessment undoubtedly simplifies the complex real interaction between small and large businesses. In fact, the parameters of the small business functioning form the important conditions of the large business and vice versa: the models of economic activity, which are becoming widespread in the large business, significantly affect the conditions of the operation for small. Therefore, any separation of the certain sector contribution to the general economic results is conditional. However, this does not detract from the value of such separate assessment for analyzing the structural changes taking place in the economy. That is why, in our opinion, in order to form a well-balanced methodological basis for the development and implementation of the Government’s regulatory policy, important studies are aimed at clarifying the contribution of the small business sector to the dynamics of target

1 Here and elsewhere we will use term “large business” for the sake of convenience, taking into account the overall results of large and medium-sized businesses, i.e. describing the sector, which can also be defined as “the whole economy apart from small business.”
indicators of the economy functioning, including those that characterize the distribution of value added by types of factor incomes and the conditions of implementation the hired workers’ economic interests.

**Analysis of research and problem statement.** Connections between small business spreading and conditions of factor incomes distribution are researched in literature mainly in the context of the study on differences inherent to these sectors’ reactions to changes in macroeconomic and institutional conditions of economic activity. In particular, a number of models differently describing the reaction of large and small businesses to cyclical fluctuations in economic activity were built. Many works devoted to investigate forms of participation of each sector in shaping macroeconomic trends and specific of large and small businesses adaptation to the process of inter-sectoral and intra-industry international trade [1—6].

Based on researches of the interaction between large and small business both foreign and domestic scientists consider the small business as more sensitive to adverse cyclical fluctuations and more dynamically captures new sectors and market niches, in times of major structural changes in the economy [7—9].

Empirical studies on the processes of creating and eliminating jobs as the basis of employment reproduction in large and small businesses, showed mainly higher activity inherent to small businesses in jobs creation, in upgrading their organizational and technical conditions and requirements for qualification characteristics of workers. In particular, a number of studies conducted in the late twentieth century were devoted to modeling the parameters of jobs creation and liquidation in sectors of small and large business. For example, in [10] was found that the gross rate of job creation is reduced in the Canada economy with moving from companies with smaller-scale of economic activities to companies with larger scale.

However, the studies of the link between the scale of enterprises business activity and qualitative parameters of employment did not reveal the advantages of small business comparing with the large business, concerning providing the higher productivity and remuneration of labor and the whole complex of characteristics the economic interests of employees implementation. T. Piketty emphasizes that larger-scale of capital creates preconditions for attracting the most skilled workers and makes it easier for the employer to provide the highest level of remuneration for a not-numerous "top-managers", whose wages can significantly "tighten up" the average salaries inherent to the large business in general [10].

Researches devoted to the role of small business’ employment in the reconstruction of the Ukrainian economy largely ascertain the significant underutilization of its potential for solving the employment policy tasks. In particular, despite the clear predominance of small businesses in total amount of jobs created, low average duration of their existence and worse than average economy qualitative characteristics of their functioning do not allow this sector make strong positive impact on the process of employment reproduction [10,11]. Highlighting a number of features inherent to small business in Ukraine and factors of their formation and spreading, domestic researchers are solidarity in assessing the role of small businesses as an important sphere of employment vacated by large and medium-sized enterprises, which however still has a very low productivity and the level of payment. Accordingly, the redistribution of total employment to small businesses in Ukraine may not cause a positive impact on the socio-economic efficiency of domestic production until there will be a radical qualitative changes in the functioning of small businesses and areas of self-employment that will reduce their lag behind in productivity and rate of return [13, 14].

However, the quantitative differences inherent to the employment characteristics of small and large businesses in Ukraine are much less explored in recent researches and changes in sphere of employment, occurring during the recent years require the updating of databases to take into account and estimate the trends that have emerged since the intensification of the reform and complication of the military-political situation in Ukraine. Therefore, the objective of this paper is to define the contribution of small businesses to the dynamics of the wage’s share in value added, generated by main industries of Ukrainian economy. And on this basis to determine the reasons, which have caused the deviation of such contribution comparing with the small business potential
for mitigating the negative effects of the deterioration of the macroeconomic situation in Ukraine.

**Research results.** Authors have chosen the share of labor cost in value added as a dependent indicator, by following causes. This indicator provides an important characteristic of the realization economic interests of employees and reflects the small business impact on the employment characteristics.

This choice is due, firstly, to the fact that this indicator provides the most comprehensive description of the factor incomes distribution between wage workers and recipients of property income. The canonical vision of this correlation suggests that the increasing of the share of labor cost in the value added indicates the equalization of the factor incomes distribution and the inclusion of the general population to beneficiaries from the growth of productivity and incomes. In the case of value added reducing, a reduction in the share of labor cost shows that the burden of deteriorating conditions for the resource reproduction is transferred mainly to wage earners and growth of such share shows that such burden is borne by the recipients of income from entrepreneurship and property. At the same time, the latter version corresponds to the "normal" distribution of functions among social groups: the nature of income from entrepreneurship and property itself and implies that during the periods of economic activity curtailment, their recipients should bear the burden of deterioration, leaving at least unchanged the real scale of labor remuneration.

Based on this interpretation of dynamics of the share of labor cost in the industry’s value added, we will analyze the contribution of small business in the dynamics of this indicator by industries, concerning to which inner statistics data allows form the database for 2012—2015 years. The retrospective period covers the difficult for the Ukrainian economy years. In 2012, the growth rate of real GDP had come close to zero, and since 2013 — have become negative, against the backdrop of complexity political and military processes. During these years, the total number of employees in Ukrainian economy decreased by 18.32% and in the sphere of small business — by 12.21%. The share of small business in the total number of employed in selected economy’s sectors, have increased from 40.99% in 2012 to 44.06% in 2015. During the same period, the average for all selected economy’s sectors share of labor costs in the value added has undergone a dramatic reduction. For enterprises of all sizes, this figure decreased from 21.5% to 14.1% and for small businesses only — from 29.9% to 14.43%. These figures show that the burden of unfavorable macroeconomic dynamics falls primarily on salaried employees, or, in other words — on the wider population, whose ability to invest in human capital is primarily define the entire set of positive changes in the economy. In this sense, the development of small business acquires a special significance in modern Ukraine, since this particular sphere of economy has the most powerful potential for mitigating the contradictions, inherent to the distribution of value added within various factor incomes.

Therefore, we will try to investigate below “how the potential of small business to mitigating the negative social consequences of the macroeconomic situation’s deterioration is realized in various industries? In particular, we will determine the contribution of small businesses to the dynamics of the labor cost share in value added by major industries, and try to estimate how much this contribution meets the potential of a small business to improve the realization of the interests of hired workers in the relations of factor incomes’ primary distribution.

To do this we will use the method of "differences", which is commonly used to separate contributions of processes occurring in a particular sector (the component part of the research object) in the dynamics of the relative characteristics of the corresponding processes throughout the object of research [15].

The formula provided by this method can be adapted to the figures of our study database as follows:

$$ILCSh = \frac{ILC_{Sh, \text{b1}} - ILC_{Sh, \text{b0}}}{ILC_{Sh, \text{b0}}} + \frac{ILC_{Sh, \text{b1}} - ILC_{Sh, \text{b0}}}{ILC_{Sh, \text{b0}}} = \frac{ILC_{Sh, \text{b1}} - ILC_{Sh, \text{b0}}}{ILC_{Sh, \text{b0}}} = \frac{ILC_{Sh, \text{b1}} - ILC_{Sh, \text{b0}}}{ILC_{Sh, \text{b0}}}$$

де: $ILC_{Sh}$ — index of labor cost share in value added as result of joint influence of corresponding
characteristics of small and large business;

$SW_{lb0}$, $SW_{lb1}$ – the labor cost share in value added, generated by small business of industry in corresponding year;

$SW_{lb0}$, $SW_{lb1}$ – the labor cost share in value added, generated by large business of industry in corresponding year;

Applying this formula to “Agriculture, forestry and fishing” data for 2014—2015 we obtain the following results as given in the Table 1.

<table>
<thead>
<tr>
<th>Figure’s name</th>
<th>Growth rate due to the joint impact of small and large business</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In sector of large business</td>
</tr>
<tr>
<td></td>
<td>2014</td>
</tr>
<tr>
<td>Payroll</td>
<td>13275,8</td>
</tr>
<tr>
<td>The labor cost share in value added</td>
<td>16,61</td>
</tr>
<tr>
<td>Weight for estimation of sector’s contribution</td>
<td>0,77</td>
</tr>
<tr>
<td>Weighted growth rate of absolute size of labor cost, %</td>
<td>-7,72</td>
</tr>
<tr>
<td>Weighted growth rate of labor cost share in value added, %</td>
<td>-23,76</td>
</tr>
</tbody>
</table>

Source: calculated by authors on data by www.ukrstat.gov.ua

According to Table 1, the share of labor costs in the value added of agriculture decreased significantly in 2015 compared to 2014 (this trend is also true for the longer period 2012—2015). Thus, on the whole, the share of labor costs in the sectoral value added fell from 13.06% to 9.71%, i.e. 25.64%.

At the same time, the major share of such reduction was caused by the decreasing of the share of labor costs as part of the value added generated by the large business sector. Indeed, despite the fact that in the small business employed up to 40.5% (in 2014) of the total number of employees of the agriculture, the share of small business labor cost in total labor costs for this industry in 2015 does not exceed 22%. This indicates a significantly lower average salary in the small business sector, compared to a large business in agriculture. Accordingly, lower rates of reduction of the labor cost share in value added attributed to small agricultural businesses were weighed by a low proportion (0.23 - specific weight in 2014). As a result, according to our calculations, the contribution of small businesses to the reduction in the share of labor cost in the value added generated by whole agricultural sector, was is only 1.88% (against 23.76% of the contribution of large businesses).

According to Table 2, in manufacturing, the share of labor costs declined in 2015 compared to 2014 by 18.2%, while the reduction in the absolute size of payroll was even higher (21.86%). Less reduction of the labor cost share compared with the absolute amount of labor costs is due to the reduction of the absolute size of value added in manufacturing. Despite the fact that the share of employed in sector of small business in the manufacturing has reaches 18.0%, the share of labor cost in the small business sector of manufacturing, in total labor cost of this industry does not exceed 6%, and in 2014 it was only 4%. In addition, in the small business sector, the rate of reduction observed on labor cost share in the industry’s value added is significantly lower than in the sector of large business (10.4% versus 18.2%). Accordingly, concerning to the small business sector of the manufacturing, lower reduction rates were weighed by the lower specific weight and, as a result, the contribution of small businesses to the rate of reduction of the labor cost share was only 0.37%, against the contribution of large business — 17.78%.
According to the data given in the table 3 construction was the first industry, where the rate of reduction of the labor cost share in the value added of small businesses sector was higher than the similar rate for large businesses (13.7% vs. 9.1%), and the share of small businesses in the total labor costs of the industry was enough significant (28% in 2014 and 41% in 2015). Accordingly, the contribution of small businesses to the overall reduction in the labor cost share in the industry’s value added is only slightly lower than the contribution of the large business sector. Consequently, in construction, first, the potential of small businesses to influence the average indicators of the whole industry was the largest among the industries, covered by our research. Secondly, the influence of the dynamics inherent to the defining indicator of the realization economic interests of the hired workers in the small business on the average for the industry indicator was strongly negative: the rates of reduction inherent to the share of labor cost in the value added of the small business were higher than the similar rates inherent to the large business.

According to the data given in the table 4, an example of the positive orientation of the small
business impact on the dynamics of the labor cost share in the industry’s value added is given by “Wholesale and retail trade” — the only surveyed industry, where in the small business sector, the labor cost share in value added has increased. And although this increase was due to the excess of the rates of reducing the added value of the sector over the pace of reducing the absolute size of labor costs, the general characteristics of the realization of the interests of hired workers in the industry was under positive influence of trend observed in small business sector.

Table 4

<table>
<thead>
<tr>
<th>Figure’s name</th>
<th>In sector of large business</th>
<th>In sector of small business</th>
<th>Growth rate due to the joint impact of small and large business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll</td>
<td>27249,1</td>
<td>23775,9</td>
<td>-12,75</td>
</tr>
<tr>
<td>The labor cost share in value added</td>
<td>8,73</td>
<td>8,44</td>
<td>-3,39</td>
</tr>
<tr>
<td>Weight for estimation of sector’s contribution</td>
<td>0,73</td>
<td>0,74</td>
<td>0,27</td>
</tr>
<tr>
<td>Weighted growth rate of absolute size of labor cost,%</td>
<td>-9,27</td>
<td>-5,12</td>
<td></td>
</tr>
<tr>
<td>Weighted growth rate of labor cost share in value added, %</td>
<td>-2,47</td>
<td>8,14</td>
<td></td>
</tr>
</tbody>
</table>

Source: calculated by authors on data by www.ukrstat.gov.ua

If the fall in the labor cost share in the value added for large businesses resulted in a 2.47% reduction in the average for “Wholesale and retail trade; repair of motor vehicles and motorcycles”, then the growth of such share in small business caused the increasing in 8.14%. Accordingly, the positive impact of the small business offset the reduction in the share of labor cost recorded in the large business, which also resulted in positive growth rates in whole industry: the increasing in the labor cost share in the value added of trade was 5.67%.

The calculations carried out according on the data of “Transportation and storage, postal and courier activities” (below — “Transport”) showed that a significant reduction in the labor cost share in the added value of “Transport” was mainly due to the worsening of the conditions for the implementation economic interests of hired workers in the sector of large business of this industry are shown in Table 5.

Table 5

<table>
<thead>
<tr>
<th>Figure’s name</th>
<th>In sector of large business</th>
<th>In sector of small business</th>
<th>Growth rate due to the joint impact of small and large business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll</td>
<td>30811,3</td>
<td>27337,7</td>
<td>-11,27</td>
</tr>
<tr>
<td>The labor cost share in value added</td>
<td>29,27</td>
<td>23,31</td>
<td>-20,36</td>
</tr>
<tr>
<td>Weight for estimation of sector’s contribution</td>
<td>0,93</td>
<td>0,93</td>
<td>0,07</td>
</tr>
<tr>
<td>Weighted growth rate of absolute size of labor cost,%</td>
<td>-10,49</td>
<td>-0,93</td>
<td></td>
</tr>
<tr>
<td>Weighted growth rate of labor cost share in value added, %</td>
<td>-18,95</td>
<td>-0,13</td>
<td></td>
</tr>
</tbody>
</table>

Source: calculated by authors on data by www.ukrstat.gov.ua

In particular, in the large business sector, the share of labor cost in value added decreased by 20.4%, while in the small business sector it was only 1.9%. However, despite the fact that the sector
of small business accounts for 27.4% (in 2014) to 25.5% (in 2015) of the total number of employed in the “Transport”, the share of small business in total labor cost of this industry varies between 6.9% in 2014 and 6.8% in 2015. Accordingly, the low rates of reduction of the labor cost, observed in the small businesses were weighed by low specific weight and the decisive influence on the reduction of the average for this industry indicator had a sector of large business. Thus, the contribution of large business to reducing the labor cost share in the added value of “Transport” was -18.9% and small business — only -0.1%.

In our opinion, the evidence suggests that in “Transport”, the small business, although characterized by significantly better conditions for the implementation of the hired workers’ interests concerning the value added distribution, however, did not have a significant potential for improving the average indicators for “Transport” due to the small specific weight of small businesses in total labor costs of this industry.

Conclusions. According to the results of the analysis, we can separate two basic scenarios for the small businesses participation in the formation of average for industry characteristics of the implementation the of hired workers interests.

The first suggests that small business is characterized by significantly better characteristics than the sector of large businesses, but a low specific weight of small businesses in the aggregate labor cost of industry, which does not allow small businesses to significantly affect the average for industry labor cost share in value added. This scenario was observed in such industries as “Transportation and storage, postal and courier activities”, "Manufacturing" and "Agriculture, forestry and fishing". The second scenario suggests that having a sufficiently large share in the total labor cost to significantly affect the average for industry proportion of value added distribution, a small business is not characterized by better than large conditions for the realization of hired workers interests: the rate of reduction the labor cost share in value added is close to a similar indicator of big business.

Finally, such industry as "Wholesale and retail trade; repair of motor vehicles and motorcycles" was the only example where the positive impact of a small business offset the negative processes in large business sector. The increasing in the share of labor costs in value added was the result of the positive impact of small business where conditions for the hired workers interests realization have improved, unlike the large sector business, where the burden of curtailing the scope of economic activity was shifting mainly to hired workers.

Література


Стаття рекомендована до друку 10.09.2018 © Власюк Ю. О., Тебенко В. М., Грибова Д. В., Біляєв С. С.

References


The article is recommended for printing 10.09.2018 © Vlasiuk Yu. O., Tebenko V. M., Hrybova D. V., Bilaiiev S. S.