

Buccella, Domenico

Working Paper

Trade and Competition Policies in Imperfectly Competitive Markets

FIW Working Paper, No. 16

Provided in Cooperation with:

FIW - Research Centre International Economics, Vienna

Suggested Citation: Buccella, Domenico (2008) : Trade and Competition Policies in Imperfectly Competitive Markets, FIW Working Paper, No. 16, FIW - Research Centre International Economics, Vienna

This Version is available at:

<https://hdl.handle.net/10419/121017>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



FIW Working Paper N°16
May 2008

Trade and Competition Policies in Imperfectly Competitive Markets

Domenico Buccella

Abstract

This work analyzes the difference between trade policy and competition policy for prices, wages, employment and national welfare when both product and labor markets are imperfectly competitive. Trade and competition policies have different impact on the domestic labor market when it is unionized. While competitive policies increase union welfare, imports from a foreign country reduce it. Competition policy in the presence of national labor unions does not reduce labor market distortions, while competition induced by trade policy from a foreign exporter reduces both labor and product market distortions and competition is harsher as long as a foreign union is more employment oriented. The impact of both policies on the domestic welfare level is analyzed.

JEL classification: F13, J51, L12, L52;

Keywords: trade and competition policies, monopoly, labor unions;

The author

Domenico Buccella is PhD Student at the Dipartimento di Economia Politica, Università di Siena and visiting scholar at the Institut für Volkswirtschaftslehre, Universität Graz.

E-Mail: buccella@unisi.it

1. Introduction

There is no doubt that in these last years one of the driving force leading to the process of globalization has been the development of economic integration determined by a concurrently growth in international trade determined by political issue like the reduction on tariff and other trade barriers, both through multilateral WTO negotiations and through unilaterally moves by single countries, and by international capital markets deregulation that consent the possibility to undertake direct investments by firms in a foreign country, in such a way that some imperfectly competitive industries could become contestable either by a national or a foreign competitor.

Trade and competition policies have different impacts on national economies because obviously they operate through different channels, although both policies are aimed to prop up product market competition: trade policy intends to assure the free flows of goods and services and generally is under the authority of supranational bodies like WTO and European Commission; competition policy resides under national authorities and have to ensure market accessibility and contestability independently of the nationality of a new entrant in the market.

The main purpose of this work is to analyze the implications for national welfare of the two different policies, taking in consideration the effects on reduction in product market imperfection in presence of country specific institution in labor markets like trade unions. In doing so, it was constructed a very simple framework. From a situation where in autarky an imperfectly competitive sector of the economy is dominated by a national monopolist, a national government can shrink monopoly power in the product market either opening to trade and allowing imports by a foreign country or enforcing competition to regulate monopoly with the entry into domestic market of a national or international owned firm. Assuming national unions, it is found that the effects of the two policies are different depending on the selected channel: while competitive policies allow domestic union to maintain the same wage level because union remains in a monopoly, in case of trade policies in general openness leads to a wage moderation because of wage competition undertaken by the foreign union; in this case it take place an international Bertrand duopoly in the labor market. To analyze the impact on domestic labor market of wage competition in the case of trade policies with a foreign commercial partner, it was held fixed domestic union sensitivity to employment and it was allowed to vary foreign union orientation.

The main results of the paper are the following. Competition policy, independently from the ownership of the entrant, is a preferred policy when tariff costs are high because international trade is not supported while, for sufficiently low values of tariff, the two policies present areas of application that will depend on the amount of fixed costs of the investment to undertake, employment orientation of the commercial partner union, and tariff level itself. The interdependency of the three variables makes the picture for the government complex, but nonetheless it is possible to define, under certain conditions, some welfare improving areas of for policy application. If the foreign union is sufficiently low employment oriented, competition policy Pareto-dominates trade policy even if trade policies is a viable option. As long as the union sensitivity in the commercial partner country increases, a welfare maximizing government, in selecting the appropriate policy, has to correctly consider the relationship between all variables to evaluate their space of application.

Related papers to the work here presented are principally Konings and Vandebussche (1998), Vandebussche (2000) and Collie and Vandebbusche (2001). In particular, the two contributions of Konings and Vandebussche (1998) and Vandebussche (2000) deal with the differences in trade policy and competition policy for domestic prices, wage and employment levels when domestic product and labor markets present distortions. This analysis differs from the previous cited works in relaxing the assumption of symmetric unions' orientation that does not allow considering the wage of the commercial partner as exogenous in the determination of domestic wage levels, obtained partially combining the structures of Bughin and Vannini (1995) and Naylor (1998).

The rest of the paper is structured as follows. In Section 2 it is presented the formal model. Section 3 analyzes policy implications pointing out the effects on national welfare. Section 4 closes the paper.

2. The Model

In this section it is developed a very simple partial equilibrium model to analyze the effects of both competitive and trade policies on national welfare when product and labor markets are imperfectly competitive.

In a Home country operates in an imperfectly competitive sector a national monopolist that produces a good denoted x . When the same good is produced in a foreign country, it is denoted y . There is only one factor of production, labor, with linear technology and

constant return to scale, such that for each worker it is obtained one unit of product: hence, production and employment are equal. In Home labor market operates a national monopoly union and workers in the imperfectly competitive sector are fully unionized. In the Foreign labor market there is also a national union but with different employment sensitivity. Union in Home sets the wage before, while the monopolist, that has the right-to-manage, successively determines employment levels.

Erosion in monopoly power of the incumbent firm could take place through:

1) The *competitive channel* that is the entry of a firm in the imperfectly competitive sector. The entrant could be either a national competitor or an international competitor. The international competitor is defined as a firm whose ownership is abroad, in the foreign country and that could locate a branch with a direct investment. The entrant, national or international, faces the same fixed costs F ;

2) The *trade channel*, namely the incumbent in Home faces import competition in its relevant product market from a foreign exporter.

Firms are engaged in a Cournot competition. In all cases the imperfectly competitive sector moves from a situation of monopoly to a duopoly in the product market. Concerning labor market, the determination of wage levels are different depending on the policy adopted. It is assumed that national governments do not subsidize the "entrant". Index 1 refers to incumbent values while index 2 refers to entrant values. The game is treated in the usual backward fashion.

2.1 The benchmark: monopoly in autarky

The monopolist in Home produces a homogeneous good in autarky facing a linear demand schedule of the following form

$$p_H = 1 - x_{1H}$$

Where x denotes production. The monopolist maximize the following profit function

$$\Pi_{1H} = (1 - x_{1H} - w_H)x_{1H} \tag{1}$$

The national union maximizes, given the optimal monopolist quantity, the total wage bill given by

$$\Omega_{1H} = w_{1H}x_{1H} \quad (2)$$

Results are summarized in Table 1.

2.2 Monopoly erosion: competition channel

A first way to erode monopoly power is improving competition in the imperfectly competitive sector with the entry either of a national or of an international Foreign owned. Concerning product market the sector passes from a monopoly to a duopoly. In the case of a national competitor, demand function in Home country is then the following

$$p_H = 1 - x_{1H} - x_{2H}$$

And, consequently, profit function for the incumbent is

$$\Pi_{1H} = (1 - x_{1H} - x_{2H} - w_H)x_{1H} \quad (3)$$

While for the entrant is

$$\Pi_{2H} = (1 - x_{1H} - x_{2H} - w_H)x_{2H} - F \quad (4)$$

Regarding labor markets, since in the Home labor market there is a national monopoly union that sets a unique wage level, the utility function that it is maximized is represented by

$$\Omega_H = w_H(x_{1H} + x_{2H}) \quad (5)$$

Results are reported in Table 1.

Competition in the imperfectly competitive sector can arise with the entry in the product market of an international Foreign owned firm which undertakes a FDI in Home country. Concerning product and labor markets, there are no substantial differences with respect to the case of entry of a national competitor: the imperfectly competitive sector also in this case passes from a monopoly to a duopoly; the workers of the foreign firm become member of the Home union. But now profits generated by the Foreign owned firm are

repatriated to foreign country and they are not computed in the national welfare. Profit functions for Home and Foreign owned firm now are given by¹

$$\Pi_{1H} = (1 - x_{1H} - x_{2F} - w_H)x_{1H} \quad (6)$$

$$\Pi_{2F} = (1 - x_{1H} - x_{2F} - w_H)x_{2F} - F \quad (7)$$

While union utility function is

$$\Omega_H = w_H(x_{1H} + x_{2F}) \quad (8)$$

Results are given in Table 1.

2.3 Monopoly erosion: international intra-industry trade channel

A second way to reduce monopoly power in the sector where the monopolist act is to promote trade policies to open the country to international competition by a foreign exporter. This situation generates an international duopoly creating intra-industry trade. Concerning labor markets now the situation is different because an international duopoly arises and since wages rates are interdependent, an international Bertrand competition will take place. Firm profit functions for Home product market now are given by

$$\Pi_{1H} = (1 - x_{1H} - y_{2F} - w_H)x_{1H} \quad (9)$$

$$\Pi_{2F} = (1 - x_{1H} - y_{2F} - w_F - t)y_{2F} \quad (10)$$

subject to the constraint that $y_{2F} \geq 0$.² Foreign firm pays a "per unit" cost of $t \in [0,1)$ for exports in Home country, representing a "basket" of costs including tariffs, transportation, logistic etc. To analyze the impact of a different Foreign union orientation on domestic labor market and to see its effects, Home union utility functions is represented by equation (5) while the union operating in the Foreign country has a utility function given by

¹ Notice that when producing in Home imperfectly competitive sector, Foreign owned firm take index 2 since it is the "entrant" firm in Home product market.

² Export quantities are denoted by index 2 because the firm that produces them is "entrant" in the relevant product market via intra-industry trade.

$$\Omega_F = w_F y_{2F}^\phi \quad (11)$$

where $\phi \in [0, \infty)$ is the sensitivity of Foreign union to employment.³ Cournot competition between the two firms in Home product market now leads to the following optimal produced quantities

$$x_{1H} = \frac{1}{3} + \frac{1}{3}t + \frac{1}{3}w_F - \frac{2}{3}w_H$$

$$y_{2F} = \frac{1}{3} - \frac{2}{3}t + \frac{1}{3}w_H - \frac{2}{3}w_F$$

Replacing Cournot quantities into union utility functions, the maximization problem becomes

$$w_H = \arg \max_{w_H} \left\{ \Omega_H = w_H \left(\frac{1 + w_F - 2w_H + t}{3} \right) \right\}$$

$$w_F = \arg \max_{w_F} \left\{ \Omega_F = w_F \left(\frac{1 + w_H - 2w_F - 2t}{3} \right)^\phi \right\}$$

which leads to the following reaction functions

$$w_H = \frac{1 + w_F + t}{4} \quad (12)$$

$$w_F = \frac{1 + w_H - 2t}{2(1 + \phi)} \quad (13)$$

Putting (13) into (12) it is obtained the Bertrand competitive equilibrium wage rate in Home country, given by

³ The union utility function expression in equation (11) could be found in Dube and Reddy (2006).

$$w_H = \frac{3 + 2\phi(1 + t)}{7 + 8\phi} = \Phi \quad (14)$$

Condition $y_{2F} \geq 0$, together with wage equilibrium level in Home, determines that international trade arises as equilibrium outcome in Home country if

$$t \leq \frac{5}{7} \approx .714 \quad (15)$$

For highest values, the tariff barrier is so high that domestic demand is equal to zero and hence firm from Foreign country does not undertake exports. Notice that the tariff barrier is independent from the parameter ϕ .⁴

As a consequence, to induce competition through the international trade channel, national government has to take into account that the barrier represented by tariffs has to be less than such threshold value. With the evaluated wage rate it is possible to compute all relevant values for Home country, reported in Table 1.

3. Policy implications and welfare

Competition in an imperfectly competitive sector of the economy, as it was seen, could be improved through increasing contestability in Home country with the entry of a national firm or with a new Foreign entrant that undertakes a direct investment (competitive channel) or when Home country opens to international trade allowing exports in the relevant product market (trade channel).

Both channels imply a shift from a monopoly to a duopoly in the product market, but when inside Home country operates a national union, the effects of the two policies are different. In fact, when it is adopted a competitive policy, the new entrant (national or international) creates job opportunities, but wage level remains unchanged by the presence of a unique union: all workers, independently of the new entrant nationality, become unionized in the domestic union. As a consequence, union utility arises. Price falls down due to increased product market competition and this in turns reflects in an increased consumer surplus. Monopolist profits squeeze, and in general profits with

⁴ Using a more general function of the type $\Omega_H = w_H y_{2H}^\eta$, it is possible to show that in reality the tariff barrier is affected by the sensitivity of Home union to employment.

Table 1: summaries of the variables for all cases in Home country

	Wage	Production	Price	Union utility	Profits	Consumers' surplus	National Welfare
Monopoly in industry	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{8}$	$\left(\frac{1}{4}\right)^2$	$\frac{1}{32}$	$\frac{7}{32}$
National Competition channel, National Union	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{6}$	$2\left(\frac{1}{6}\right)^2 - F$	$\frac{1}{18}$	$\frac{5}{18} - F$
International Competition channel, National Union	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{6}$	$\frac{1}{36}$	$\frac{1}{18}$	$\frac{1}{4}$
International Trade, Tariff Barrier	ϕ	$\frac{2}{3}\phi$	$\frac{5}{3}\phi$	$\frac{2}{3}\phi^2$	$\left(\frac{2}{3}\phi\right)^2$	$\frac{2}{9}\left[\phi - \frac{3\phi(3-t)}{7+8\phi}\right]^2$	$\frac{T}{3(7+8\phi)^2}$ *

* $NW = \text{Union Utility} + \text{Profits} + \text{Consumer surplus} + \text{tariff revenues}$

$$T = (46 + 60t - 82t^2)\phi^2 + (68 + 90t - 98t^2)\phi + 36$$

competitive policies are lower. But obviously welfare level, both with a national or an international competitor, is higher with respect to autarky.

Concerning the selection between a national and an international competitor, if a national competitor has the availability to undertake the initial investment, a government will prefer a "national" entry with respect to an international one: in the last case, in fact, the "international" entrant will repatriate the generated profits. But the key factor in competitive policy for governments resides exclusively in the availability to undertake the initial investment F of the new entrant. In this analysis it is obtained that the maximum amount of investment for the competitor is $0 \leq F \leq 1/18$.

The case of trade policy is different: inducing competition in the imperfectly competitive sector of Home economy through openness to export exposes the national union to wage competition from the Foreign country which, as a consequence, lowers Home wage level. This could be summarized in the following result.

Result 1: Trade policy reduces Home wage level. Wage competition is harsher as long as Foreign union is more employment oriented.

Proof: Under condition (15), for $\phi \in [0, \infty)$ the wage level in equation (14) is always lower than $w = 1/2$, the wage that results in autarky and under competition policy. Differentiation of (14) with respect Foreign union employment sensitivity yields

$$\frac{\partial w_H}{\partial \phi} = -\frac{2(5 - 7t)}{(7 + 8\phi)^2} < 0$$

An increase in Foreign union employment sensitivity depresses Home wage. \square

While trade policy induces unambiguously a wage moderation with respect to competition policy also when operates a national monopoly union in Home labor market, the effects on production and hence, given the hypothesis outlined in the model, on job creation in Home country striking depend on both the tariff level and the employment orientation of Foreign union: trade policy does not always lead to create new job opportunities.

Result 2: Under certain conditions trade policy creates more jobs with respect to autarky situation, but job creation is always lower with respect to competitive policy.

Proof: Using the relative expression in Table 1, employment (production) with trade policy is greater than production in autarky if

$$\phi \leq \frac{3}{8(2t - 1)} \quad (16)$$

for $t \in [0, 1/2]$, while for $t \in (1/2, 5/7]$ employment with trade policy is greater than employment in autarky $\forall \phi \in [0, \infty)$. Differentiation of Home employment in international trade regime with respect to t yields

$$\frac{\partial x_{1H}}{\partial t} = \frac{4\phi}{3(7 + 8\phi)} > 0$$

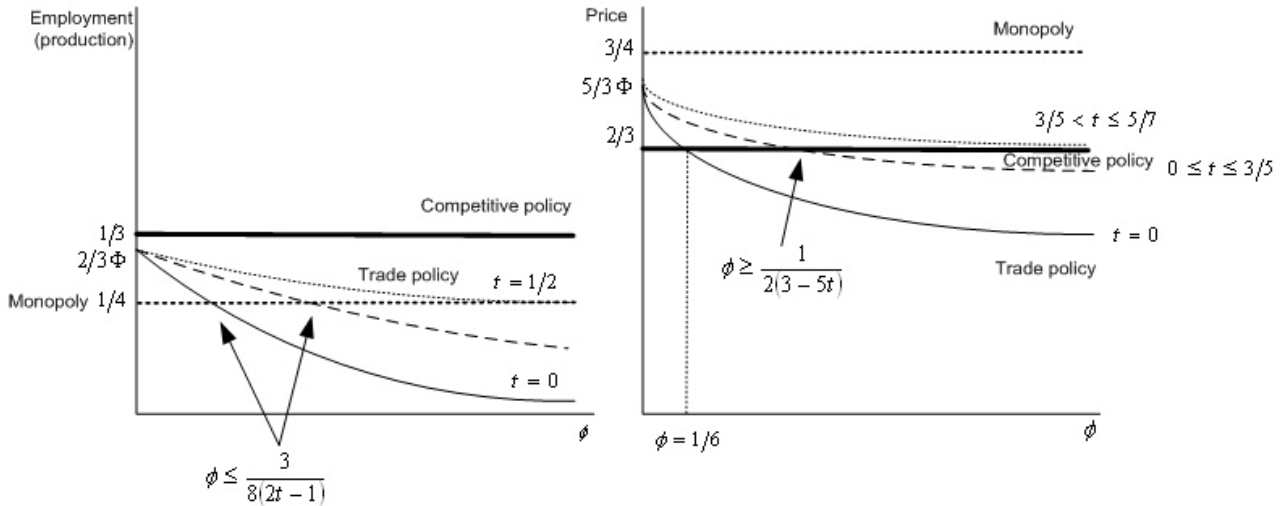
in the range where trade is an equilibrium unless $\phi = 0$. This allows to evaluate Home production in its upper extreme, namely for $t = 5/7$: it follows that $x_{1H} = 2/7 < 1/3$, the employment level under competitive policy. \square

Trade policy, to create new job opportunities, needs a mix of conditions to be satisfied: if tariff barriers are not sufficiently high, production (and hence employment) in Home country is higher with respect to autarky only if the Foreign union attaches to employment in its utility function a weight lower than the threshold value represented in equation (16), while for relatively high barriers, openness to trade assures higher level of employment. The former result at first glance could appear counterintuitive: from result 1 it follows that Foreign union sensitivity to occupation induces a wage moderation in Home, and this normally has to be translated in an *increase* in employment; but as long as Foreign sensitivity increases, Foreign wage decreases more rapidly than Home wages⁵ and this in turns increases the demand for imports, driving down prices in Home. Nonetheless the presence of tariff barriers does not assure that under trade policy price level will be the lowest affordable.

Result 3: Under certain conditions, price with trade policy is lower than under competitive policy.

⁵ In particular it is possible to show that for $t > 2/7$ Foreign wages are lower than Home wages $\forall \phi \in [0, \infty)$.

Figure 1 *Employment and price in the imperfectly sector of the economy under the different policies*



Proof: Comparing values for price in Table 1 it is obtained that for $t = 0$ price under trade policy is lower than price under competitive policy if $\phi \geq 1/6$. For $0 \leq t \leq 3/5$, price under trade policy is lower than price under competitive policy if

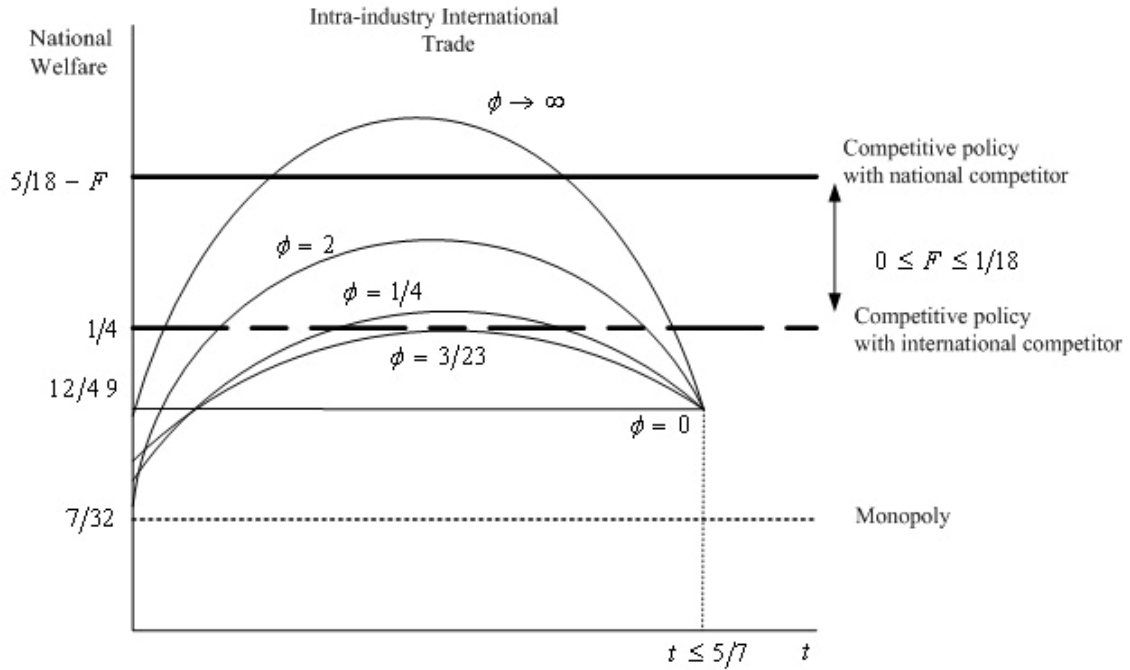
$$\phi \geq \frac{1}{2(3 - 5t)}$$

while for $3/5 < t \leq 5/7$ price under trade policy is higher. Nevertheless, price level under both policies is always lower than price under autarky. \square

Price is lower under trade policy with respect to competitive policy if the Foreign union is sufficiently employment oriented and at same time tariff barriers are sufficiently low. Results 2 and 3 could be exemplified in Figure 1, which illustrates the variables under study under the two different policies. As it is possible to see, the effects of a change in trade barriers due to trade policy is in a shift of the relative variables.

Concerning Home union, from results 1 and 2 it directly follows that in the range $t \in [0, 1/2]$, union utility level under trade policy is lower than union utility level under competitive policy. Further inspection leads to the following result.

Figure 2 *National Welfare under different policies*



Result 4: In the range where trade policy is admitted, union utility level is always lower under trade policy with respect to competitive policy $\forall \phi \in [0, \infty)$.

Proof: By simple comparison of Home union utility values in Table 1. \square

Both trade and competition policies erode monopoly power in Home country. Although competitive policy always squeezes monopoly profits, these could be higher for Home firm under openness to international trade. A corollary of result 2 is that profits for the Home firm are higher with respect to monopoly in autarky under condition (16) for $t \in [0, 1/2]$, while for $t \in (1/2, 5/7]$ profits under trade policy are greater than under autarky $\forall \phi \in [0, \infty)$.⁶ Instead, from price reduction particularly benefits consumers. Combination of lower price and higher demand yields the following result.

Result 5: In the range where trade policy is admitted, consumer surplus in Home is always higher under trade policy with respect to competitive policy $\forall \phi \in [0, \infty)$.

Proof: By simple comparison of Home consumers' surplus expression in Table 1. \square

⁶ This is due simply to the fact that $\Pi_{1H} = (x_{1H})^2$.

Taking in consideration national welfare as a whole and not only single components, the picture that government faces to select the policy to reduce monopoly power becomes complex. Whereas for $t > 5/7$ competition policy is welfare improving and, as a consequence, the discussion outlined at the beginning of this section regarding the choice of the entrant in the imperfectly competitive sector of the economy is valid, when $t \leq 5/7$ national welfare will depend at the same time on tariff barriers, fixed costs and Foreign union sensitivity. Despite the complexity due to the interdependence of these three variables, it is possible to define, under certain conditions, some welfare improving areas of application of the different policies. The situation is exemplified in Figure 2.

For values of union sensitivity such that $0 \leq \phi \leq 3/23$, the competitive policy assures a welfare level higher than the trade policy; when a Foreign union has a small sensitivity to employment, it follows that Foreign wages are sufficiently high, implying that the demand for Foreign goods (imports) is relatively small and, as a consequence, tariff entries are low. For a national government is hence more convenient to reduce monopoly power promoting competitive policies: although wages are higher, the increased production and the reduction in price will generate an increase in consumers' surplus such that to offset the loss in tariffs.

When $\phi > 3/23$, in the area where trade policy is admitted the national welfare expression will depend not only on Foreign union sensitivity and tariff barriers, but national governments has to take into account also the magnitude of the fixed investment that the entrant in the product market has to face. It is possible to show that for $3/23 < \phi \leq 29/14$ and $0 \leq F \leq 1/18$, the area defining where trade policy Pareto dominates competition policy is given by the following interval

$$t \in \frac{90\phi^2 + 135\phi \pm \sqrt{141696\phi \left(\left(\frac{7}{369} + F \right) + \frac{49}{41}F - \frac{29}{738} \right) \left(\phi + \frac{7}{8} \right)^2}}{246\phi + 294\phi^2} \quad (17)$$

while for $29/14 < \phi < \infty$ and $F = 0$ this area is determined by the following relation

$$t \in \frac{90\phi^2 + 135\phi \pm \sqrt{2688\phi \left(\phi - \frac{29}{14} \right) \left(\phi + \frac{7}{8} \right)^2}}{246\phi + 294\phi^2} \quad (18)$$

Hence the two policies, also in the area where international trade could be supported, present different area of application which is affected both from the fixed costs of investment and union sensitivity. For $\phi > 3/23$, as long as Foreign union sensitivity increases, the area where trade policy is improving enlarges while reduction in F shrinks the area: the two forces work in different directions. Specifically, given the complex interdependency of the variables, nothing could be said because it is needed to know the exact magnitude of the driving forces to determine which force will dominate. In taking the appropriate decision, national governments have to consider all this elements to assure that the highest level of national welfare could be afforded.

4. Conclusions

The main scope of this paper was to discuss and analyze what kind of policy instrument a national government has to use in reducing monopoly power and improving competition in an imperfectly product market, considering their effects on national welfare level. For this purpose it was constructed a very simple model where in the domestic labor market a national monopoly union operates; to evaluate the impact of trade policies, it was held fix the domestic union sensitivity to employment and it was let to vary that of a union operating in a foreign country.

Both trade and competition policies (through increase of import competition and market contestability, respectively) erode monopoly power: product market shifts from a situation of monopoly to a Cournot duopoly. Instead the effects on labor markets are different: while competitive policies allow domestic union to maintain the same wage level (due to the fact that inside the country the union remains in a monopoly position like in the autarky situation), if a foreign union is sufficiently employment oriented, openness to trade leads to a wage moderation because now domestic union undertakes a Bertrand competition against a foreign union and a Bertrand duopoly in the labor market arises. As a consequence the effects of the two policies on prices, employment and welfare are different.

In general it could be said that competition policy with a new national or international entrant is a preferred policy when tariff costs are high, while for sufficiently low values of tariff, the area of application of the two policies will depend on fixed costs, sensitivity to employment of the union that operates in a foreign country and tariff itself. Although the interdependence of these three variables makes the picture complex, it is possible to

define, under certain conditions, some areas where a policy improves welfare level with respect to the other. If the foreign union is sufficiently low employment oriented, competitive policies could Pareto-dominate trade policies also in the area where trade policies are admitted. As long as foreign union sensitivity becomes higher and higher, a national welfare maximizing government, in choosing the different policies, has to take into account the relations between the variables and policy makers have to correctly evaluate their space of application.

The model is rather simple and the findings are related to the simplifying hypothesis of holding fixed employment sensitivity in domestic union. In order to obtain a more complete picture to evaluate both policies effects on national economy could be useful relaxing this assumption. Moreover, it could be interesting to explore other ways to reduce monopoly power in the product market represented by both opening borders and promote entry by the instrument of planning production facilities "in loco", requiring future research.

References

- Bughin, J., Vannini, S., 1995. Strategic direct investment under unionized oligopoly. *International Journal of Industrial Organization* 13, 127-145.
- Collie, D. Vandenbussche, H. 2001. Trade, FDI and Unions. CEPR Discussion Paper No. 2772.
- Dube, A. and S. G. Reddy (2006). Threat Effects and Trade: Wage Discipline through Product Market Competition. SSRN Papers - id935969.
- Naylor, R., 1998. International Trade and Economic Integration when Labour Markets Are Generally Unionised. *European Economic Review*, 42, 1251-1267.
- Vandenbussche, H., Konings, K., 1998. Globalisation and the Effects of National versus International Competition on the Labour Market: Theory and Evidence from Belgian Firm Level Data. *The World Economy*, Volume 21, Number 8, 1998, pp.
- Vandenbussche, H., 2000. Trade Policy Versus Competition Policy: Substitutes or Complements? *De Economist*, 148: 625-642.