

A view for the morbidity attributable to smoking since the microeconomic

Efrain Sanchez Gonzalez and Fe Fernandez Hernandez*

Faculty of Medical Science, University of Medical Science of Havana, Cuba

Abstract

Tobaccos and cigarettes are legal drugs. These are ordinaries and necessities goods too. This means that the useful of tributary policy in smoking control is better while the absolute value of the elasticity of price from the demand would be closest to one. In smoking researches there are two main variables: the smoker number and the consumption intensity. In the socioeconomic context about smoking the smoker number keep a lineal relation with costs and benefits attributable to smoking. In the consumption intensity case the relation is lineal front of the benefits and increasing accelerated front of the costs. This knowledge since the Microeconomic may obtain a better understanding about socioeconomics subjects about the morbidity attributable to smoking.

Introduction

Tobaccos and cigarettes are considered legalized drugs and are socially accepted especially in producer countries. These are ordinaries and necessities goods. Because of this it had developed several researches that had checked the useful of tributaries policies for the smoking control [1].

Generally the elasticity price of the demand from these goods is negative and the absolute value is less to one. This situation should justify an expansive tributary over tobacco consumption by tax [2]. While higher is the individual consumption higher addiction will be induced to smokers and must increase the effective demand of health services because of smoking. Also is expectable an increase of the reserve price and a farer from the satisfaction point [3]. Several countries had applied control policies over smoking to reduce the tobacco consumption. These policies had demonstrated that is possible an effective useful from the fiscal policy in the smoking control [4-7].

The good result applying these policies were based on the well knowing of smoking cost over the national economy. Consequently the precise estimation of the smoking cost will make trustier the respective research [8]. A strong inelastic condition from the tobacco demand should increase the poorness condition front of an expansive tributary policy over tobacco consumption. This should be because of the induced reduction of the actual income don't has an immediate reducer effect over the tobacco consumption [9]. These characteristics make that higher tobacco consumption carries to higher tobacco dependence and higher ability to pay for tobacco consumption. This circle makes stronger the tobacco dependence and the inelastic condition from the tobacco demand. At same time will increase the morbidity attributable to smoking and the smoking cost too [10].

In the Public Health context the sickness cost researches' had gained a relevant role especially in researches related with no-transmissible sickness. These are the most related sickness with smoking as risk factor [11]. A prevalence reduction should decrease the smoking cost but not

always is possible. It is important take account others conditions that have a direct influence over the smoking cost like the consumption intensity [12]. That's why the no tributary policies to reduce the intensity of the tobacco's consumption play an important role reducing the smoking cost. Nevertheless this result would be farer in time while the tobacco dependence is higher [13].

Microeconomic had been a very useful tool designing and applying fiscal policies for the smoking control. This document in particular is focused in show a view for the morbidity attributable to smoking since the Microeconomic.

Results

Smoking has two main explicative variables. These are the smoker's number and the consumption intensity. These variables determine the morbidity attributable to smoking [14].

The independent variation of these variables carries to variation over smoking impact in the same way. Then, the smoking cost is directly related with each variable in direct proportion way. This situation shows the relation between these variables and the social inequity attributable to smoking too [15].

The tobacco consumption should carries to social irreversible cost at short time. These cost overcharge to no smoker people showing a peculiar social inequity which dimension and characteristic will depend of the smoking impact [16].

The most evident case is the passive smoker. They suffer the same morbidity consequences attributable to smoking that the active smoker.

*Correspondence to: Fe Fernandez Hernandez, Faculty of Medical Science, University of Medical Science of Havana, Cuba, E-mail: fefh@infomed.sld.cu

Key words: smoking, morbidity, microeconomic

Received: August 19, 2019; **Accepted:** September 06, 2019; **Published:** September 12, 2019

That's why each measure way's for the social inequity attributable to smoking needs take account these variables according to the own particularities from smoking impact [17].

In the consumption intensity case the relation isn't simple. The real consumption intensity depend in increasing way from the past consumption intensity. This is because of the constant accumulative effect of smoking over the morbidity and the costs attributable to smoking too. In consequence the morbidity attributable to smoking will increase acceleratory front of the consumption intensity. Then, the individual morbidity attributable to smoking is an increasing and convex function from the consumption intensity [1,9,10,14,18-20].

Assuming a lineal relation with the others risk factor the social morbidity no attributable to smoking would be lineal but the social morbidity attributable to smoking would be convex, like show the following graph as example (Figure 1).

Increasing the smoker population or the consumption intensity must increase the tendency from the social morbidity too. Also must increase the distance between the social morbidity and the morbidity no attributable to smoking because must increase the morbidity attributable to smoking. This condition carries to higher social inequity attributable to smoking too.

In the case of the socioeconomic inequity attributable to smoking by morbidity the effects from the social redistribution induced should be supported by tobacco sales. These have a lineal relation front of the number of smokers and the consumption intensity too. In the cost case this relation is lineal front of the number of smokers but is increasing and accelerated front of the consumption intensity. This condition is mainly based on the accumulative effect from smoking over the morbidity attributable to smoking.

In this circumstance there are two important points. One is when tobacco sales are equal to smoking cost. In this point the smoking cost are compensated with the tobacco sales and the smoking social externality is null. Since this point in following the smoking cost are higher than tobacco sales and the smoking cost dynamic is higher too. Since this point in following the smoking consequences are more irreversible at short time while the circumstance would be farer from this point.

The other point is when the marginal cost is equal to the middle price of the market (marginal income). This is the point that maximizes the difference between sales and cost. The real existence of these

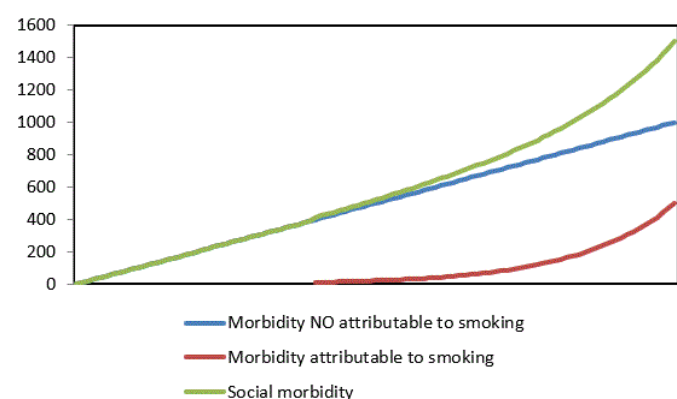


Figure 1. Assuming a lineal relation with the others risk factor the social morbidity no attributable to smoking would be lineal but the social morbidity attributable to smoking would be convex

points depends from the particular circumstances of each researched population.

Since the star point, if the marginal costs are inferior to marginal income will exit both point. However, if the marginal costs are superior to marginal income, the smoking costs will be always higher than tobacco sales. This circumstance in particular shows the social unsustainable of smoking in any way.

The area between the social morbidity and the morbidity no attributable to smoking shows the gross morbidity attributable to smoking. By this way is possible obtain a general rate for the social inequity because of the morbidity attributable to smoking. This rate should be calculated like the division between the gross morbidity attributable to smoking and the social morbidity.

Each consumption intensity level is associated to some morbidity level too. By this way is possible to relate the gross morbidity attributable to smoking with the consumption intensity and create a rate using the consumption intensity like main variable to measure the same inequity type.

Conclusion

The understanding about the morbidity because of smoking since the Microeconomic may make a better valuation about smoking impact over the health and the economy too.

References

1. Fernández Hernández F, Sánchez González E (2019) La carga económica del tabaquismo. España: *Editorial Académica Española*.
2. Sánchez González E, Fernández Hernández F (2017) Caracterización económica general del consumo de cigarrillos en Cuba de 2011 a 2013. *Revista del Hospital Psiquiátrico de La Habana*.
3. Fernández Hernández F, Sánchez González E (2017) Pérdida de productividad por el consumo de cigarrillos en la jornada laboral. *Revista Cubana de Salud y Trabajo* 18: 9-12.
4. Fonseca-Chaves, Sandra (2017) Tabaquismo en Costa Rica: susceptibilidad, consumo y dependencia. *Salud Pública de México* 59: 30-39.
5. Bardach, Ariel (2018) Carga de enfermedad atribuible al uso del tabaco en Paraguay y potencial impacto sanitario y económico del aumento del precio a través de impuestos. *Revista Peruana de Med Exper y Salud Púb* 35: 599-609.
6. Bardach, Ariel (2016) Carga de enfermedad por tabaquismo e impacto potencial del incremento de precios de cigarrillos en el Perú. *Revista Peruana de Medicina Experimental y Salud Pública* 33: 651-661.
7. Pichon-Riviere, Andrés (2016) Impacto económico del tabaquismo en los sistemas de salud de América Latina: un estudio en siete países y su extrapolación a nivel regional. *Revista Panamericana de Salud Pública* 40: 213-221.
8. Blanco, Adriana (2017) Diez años del Convenio Marco de la OMS para el Control del Tabaco: avances en las Américas. *Salud Pública de México* 59: 117-125.
9. Fernandez Hernandez F, Sanchez Gonzalez E (2019) The Socioeconomic Inequity Attributable to Smoking. *Med Prac Res* 3:6.
10. Fernández Hernández F, Sánchez González E (2017) Carga epidemiológica vs carga económica del tabaquismo por morbilidad. *Rev. Ciencias Médicas* 21: 60-66.
11. Varona Pérez P, García Roche G, WilliamsFogarty A, Britton J (2015) Mortalidad por cáncer de pulmón y cardiopatía isquémica atribuible al tabaquismo pasivo en Cuba - 2011. *Rev Cubana HigEpidemiol* 53.
12. Fernández Hernández F, Sánchez González E (2017) Algorithm to calculate the smoking economic burden in active and passive smokers. *MOJ Toxicol* 4: 373-375
13. Sánchez González E, Fernández Hernández F (2018) La relación entre la política tributaria y el control del tabaquismo en Cuba. *CCM* 22: 238-249.
14. Fernández Hernández F, Sánchez González E (2019) Economic Inequity Attributable to Smoking Ratio's for the Public Health. *Health Econ Outcome Res Open Access* 4: 161.

15. Lightwood J, Glantz SA (2013) The Effect of the California Tobacco Control Program on Smoking Prevalence, Cigarette Consumption, and Healthcare Costs: 1989-2008. *PLoS ONE* 8: e47145.
16. Sánchez González E, Fernández Hernández F (2017) El rol de las autoridades fiscales en el control del tabaquismo. *Rev Ciencias Médicas* 21: 62-67.
17. Arredondo A, Recaman AL, Pinzon C, Azar A (2018) Financial consequences from smoking-related diseases in middle-income countries: Evidence and lessons from Mexico. *Int J Health Plann Mgmt* 33: e454-e463.
18. Fernández Hernández F, Sánchez González E (2017) Impacto del tabaquismo en el presupuesto sanitario de Cuba 1997-2014. *Revista del Hospital Psiquiátrico de La Habana* 29.
19. Sánchez González E, Fernández Hernández F (2016) La pérdida de productividad laboral atribuible al tabaquismo. *Revista Cubana de Salud y Trabajo* 17: 57-60.
20. Sánchez González E, Fernández Hernández F (2018) Costo social por pérdida absoluta de productividad laboral. *Revista Cubana de Salud y Trabajo* 19: 33-39.