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### **The Need for Government Intervention in the Microwavable Food Market**

Many people would agree that the microwave oven is one of the best inventions of the century. In fact, microwave ovens have become so predominant in household cooking that over 90% of families in the United States have a microwave oven and most people use the microwave at least once a day to cook, thaw, or reheat a beverage, a snack, an entrée, or even a full meal (Naveeda, K. & Prakash, J., 2004). The microwave oven allows users to significantly reduce cooking and prepping time for a meal. Dishes that traditionally require an hour's prepping time can be done within minutes by the press of a few buttons on a microwave oven. Not only does the microwave oven save time and create convenience, it allows a new food industry to emerge. There are now microwavable meals for all types of cuisine. One can get a "Cheap Ones" fried chicken meal for 99 cents or a "Hunger Man" steak dinner for \$3.95. The huge and cheap selection of microwavable products allows a person to easily purchase an entire week of meals composed solely of various brands and types of microwavable food.

Despite the convenience and the cheap costs of microwavable meal, the general public fails to recognize the possible side effects from over-consuming microwaved food items. Microwaved food contains fewer nutrients than traditionally cooked food, and the pro-longed consumption of microwaved food (food with altered physical properties) can result in cancer, a weakened immunity system, memory loss, and decreased intelligence (Hoffman, C.J., & Zabik, M.E., 1985). Government intervention is necessary to raise public awareness of side effects of microwavable food consumption to reduce over-consumption of such demerit good in order to lessen external social costs incurred by such consumption.

### ***Why Government Intervention is Necessary?***

Glimpsing at the microwavable food industry, one would think that the market is efficient with an ongoing demand and an abundant supply. Consumers are paying for a low-cost microwaved meal and they are happy to have saved hours of prepping and cooking time, and some are enjoying the tastes of the microwaved meal. Producers receive sale profits and continue to market and develop new microwavable meals. Since time is money, microwavable food seems to be a cost-effective and an ideal choice for today's busy lifestyles. For less than five dollars, a consumer can get a microwavable filet mignon meal with a reasonably sized steak, a portion of mash potato, vegetables, and a brownie, which would otherwise cost close to ten dollars plus the time needed to prepare and cook the produce if these items are separately purchased at a grocery market. The private cost seems low comparing to the explicit private benefits the consumer receives.

Upon closer examination of microwaved food consumption, one would realize such a deal is too good to be true. The initial private cost of consumption is simply the cost of the microwavable food plus the cost of electricity needed to microwave the item. What consumers failed to realize is the long term social cost incurred as a result of prolonged or over consumption of microwaved food. Due to imperfect information, consumers are unaware of the long-term detriments and negative externalities created by consuming microwaved food. Since microwaved food contains minimal nutrients and altered physical properties, its pro-longed consumption leads to negative health impacts. First, most microwavable meals are high in fat, high in sodium, high in calories, and low in nutrients. Second, microwaved food items contain altered physical and chemical properties that lead to cancer or other sicknesses. Third, the ease of accessing and making a microwavable meal tends to prompt consumers to eat more of the

product. The continuous consumption of microwaved food is similar to having a diet relying solely on potato chips, candy bars, and other garbage snacks. Prolonged consumption and over consumption easily plays a contributing factor to obesity, cancer, or other health issues, which adds to the social costs of rising Medicare expenditures and health insurance premiums. The consumption of microwaved food leads to a negative externality where tax payers would eventually have to pay more to offset the rising medical costs due to folks who trash their health eating microwavable meals (Maranesi, M., Bochicchio, D., Montellato, L., Zaghini, A., Pagliuca, G., & Badiani, A., 2005).

As a result of eating microwaved food, its negative externality can cause market failure since the pricing of such food items does not take into account the full social costs of consumption. Producers of microwavable meals are only interested in maximizing their profit. They will only take into account the private costs and private benefits arising from their products. Producers, therefore, will not initiate actions to reduce the supply or demand of their products or to offset the social costs as a result of prolonged consumption of microwaved food. Doing so will jeopardize their business since any actions would reduce sales and profits.

Consumers, on the other hand, will only consider their own private costs (the initial costs) and private benefits (time saved). Consumers are not taking any actions to correct the market due to three main reasons. First, there is a lack of information regarding the side effects and social costs of microwaved food consumption. Many consumers simply do not know that it is unhealthy to consume microwaved food and the end result is rising medical costs. Second, many people enjoy microwaved food since it is time saving and the private cost is low. They value the initial time saving benefit more so than the negative externality it can create. Since time is money, time saved with microwaved cooking outweighs the opportunity cost of spending time to

prepare and cook a fresh meal. Third, rational ignorance is engaging people to continue their current behavior. Consumers believe that just changing their personal decisions will not make a difference since the rest of the society continues to value the consumption of microwaved food. Since people do not see the long term health impacts and social costs of the future, they will continue to do what they are currently doing in the present.

Both the producers and the consumers of microwaved food will only consider their private costs and private benefits, resulting in an efficient market with a negative externality. Tax payers have to pay increased medical costs to bear the marginal damage as a result of other's consumption of microwaved food. Government intervention is necessary to ensure information on side effects of microwavable food consumption will be delivered to consumers and internalize the social costs of prolonged and over consumption of such food items by the producers and the consumers.

***Methods of Government Intervention and Possible Effects:***

The government can intervene via two major avenues. First, the government can target the issue of imperfect information by allowing the external social costs and side effects of microwaved food to be made known to the consumer. Education, campaigns, or advertisements can solve this problem. The most direct method would be to require producers of microwavable food to include a mandatory health warning on all food packaging. The analogy of putting warning labels on microwavable food is similar to placing the surgeon general's health warning on cigarette packages. The health warning may be a brief sentence that touches on the side effects of microwaved food consumption. This method allows all consumers to be exposed to the information necessary to make a more informative decision regarding the product, and forces the producer to take on all the cost needed to deliver the information. However, a lot of time

may be needed for effects to be felt and some consumers might simply ignore the warning message. In addition, the benefits of the warning message must outweigh the cost of implementation, such as the addition cost of printing the text, in order for this method to be effective. In order to offset the additional production cost, producers will have to increase the prices of their microwavable products. The price increase will likely decrease the demand for these food items, thus leading to a reduction of microwavable food consumption.

The second avenue for government intervention would be to impose a tax on microwavable food. Such financial intervention would help to internalize the external costs by having either the consumers or producers, or both parties, to be responsible for the social costs incurred as a result of prolonged and over consumption of microwaved food. Tax collected would be used for paying off medical costs resulting from microwaved food consumption. This method will add to the private cost of purchasing the product, thus decreasing demand. As in the case of any taxation or subsidy, it is always difficult to evaluate the external cost to establish a right amount of tax. Overvaluation or undervaluation of the tax amount might not result in maximizing the society's welfare.

If either or both of the above method can be imposed successfully in the microwavable food market, the external social costs will be greatly reduced. As price for microwavable food increases in either case, demand will decrease, leading to a reduction in microwavable food consumption. The reduction of microwavable food consumption would lead to an increased consumption of its substitute goods, including fresh produce or other forms of prepared meals, such as bake-able meals or restaurant take-outs. Producers of microwavable meals may experience less profit, and switch their production lines to other food items. Consumers will eat

less microwaved food, possess better health, and incur less medical costs as a result of prolonged or over consumption of microwaved food.

***Why the Government has not Intervened?***

As of today, the government has not imposed any intervention in the microwavable food industry. There are two possible reasons for the lack of intervention. First, the government does not always act in the public's interest. Political reasons or lobbyists support the microwave food industry could result in the prevention of government intervention in the industry. Second, a long period of time is needed for the government to create a comprehensive plan and detailed analysis of the interventions to ensure the benefits outweigh the costs. The government would want to avoid adverse effects such as the reduction of consuming microwaved food leading to an increased consumption of fast food, which is not necessarily a healthier choice for the consumers.

***Conclusion***

Government intervention is necessary to raise public awareness of side effects of microwavable food consumption to reduce over-consumption of such demerit good. The prolonged consumption and over consumption of microwaved food lead to health impacts that ultimately increase medical costs. Since producers and consumers are only interested in the private costs incurred and the private benefits they receive, government intervention is necessary to ensure these parties also take responsibility for the resulting external social costs. The government must carefully examine the different intervening methods to ensure its plan can truly lead to healthier choices and more informative choices by the consumers.

## References

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