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Peer Networks and Tobacco Consumption in South Africa

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Tobacco consumption is hazardous at all levels. In South Africa, cigarette smoking is a major health problem accounting for thousands of premature deaths each year, including those that are exposed to second hand smoke. In recognition of these consequences, tobacco consumption, particularly cigarette smoking has received a significant amount of attention since the democratic transition in 1994. With the policy change, there has been a significant decline in tobacco consumption in the last two decades. A policy that targets increases the minimum age below which individuals cannot purchase cigarettes, since majority of smokers initiates smoking at a very young age (below 24 years), an age group characterised by high degree of peer influence. Empirically motivated research on tobacco consumption in South Africa have shown a close adherence to determining the effect of tobacco excise taxes on individual smoking behaviour, ignoring the effects of peer network (indirect effects of the policies).

There is strong evidence internationally that tobacco policies have both direct and indirect effects on individual smoking behaviour. In fact, individuals do not exist in isolation but are embedded within networks of relationships, such as families, co-workers, neighbours, friendships or socio-economic groups. Even though social influences may play an important role in the evaluation of policies, economic evaluations are typically focused on the central question of how individuals independently respond to interventions. Economic reforms or the introduction of new policy instruments are likely to affect individuals not only directly, but also indirectly by a change in the behaviour of their social reference group. Consequently, it is important to understand and predict social interaction effects in order to comprehend the multiplier effects for economic policy. In this paper I examine the impact of peer networks on tobacco consumption in South Africa.

The effect of the behaviour of a social reference group on individual outcomes is referred to as social interaction or peer effect. Social interaction effects can result from a preference for conformity to the behaviour and norms of a certain social group. When social interactions are important, policy interventions on single agents might have large effects through social multipliers (indirect effects of the intervention). When there is social interaction, aggregate estimates will be larger than individual estimates because there is a direct effect of policy changes on individual behaviour and an indirect effect through the effects on the social reference group. Researchers in South Africa have predicted the behaviour of individuals towards the various tobacco policy interventions and have advised policy makers accord- ingly. Their findings might be biased by the social multiplier effects, which generate or at least exacerbate fluctuations in aggregate behaviour. Sometimes social interaction effects and thereby social multipliers are even explicitly desired by policy makers. This is the case for

example if policies are aimed at influencing the minimum age under which individuals cannot purchase cigarettes.

Considering individuals between the age 15 and 24 years, I find a positive effect of peer network on individual smoking participation and smoking intensity. Specifically, individ- uals in social reference groups with high proportion of smokers are more likely to become smokers. Similarly, individuals are more likely to be heavy smokers if majority of their social reference group are heavy smokers. The implication of these findings is that tobacco policies have both direct and indirect effects on the decision to smoker, especially if these policies are targeting the youths. For example, tobacco excise taxes and other tobacco control policies directly affect the decision to smoke and the smoking intensity of the peer reference group, indirectly affecting own smoking behaviour. While this is the case, studies identifying the impact of a tax policy focus only the elasticity of a tax change, ignoring the indirect effects of the intervention.