Methodology of Dynamic Adjustment to Tax Policy Center Analysis of Romney Plan
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The methodology for this report is relatively straight-forward and is outlined in a detailed manner here. The methodology starts by presenting the figures directly from the Tax Policy Center report and earlier Tax Policy Center distributional analysis that outline the baseline numbers for tax year 2015 (current policy baseline). It should be noted that the likely economic growth effects would not fully take effect by tax year 2015, but because TPC only provides 2015, we assume that the growth effect is "in full" by 2015 in order to perform the distributional analysis. It should be noted that tax units are placed in their cash income groups based on 2011 incomes.

Two primary data sources for the data used in the calculations are as follows:
Romney plan: http://www.taxpolicycenter.org/publications/url.cfm?ID=1001628 and
Baseline data for 2015: http://www.taxpolicycenter.org/numbers/Content/PDF/T12-0126.pdf.

Table 1: Baseline Data for Tax Year 2015 from Tax Policy Center

Cash Income Group	# of Tax Units (thousands)	Avg. Pre-Tax Income (Baseline)	Avg. Federal Taxes (Baseline)
0-$30,000	65,745	16,282	741
$30,000-$50,000	30,300	42,073	5,454
$50,000-$75,000	24,031	65,604	11,121
$75,000-$100,000	14,893	92,846	17,663
$100,000-$200,000	23,887	145,539	31,662
$200,000-$500,000	7,059	305,065	74,677
$500,000-$1,000,000	1,187	726,148	193,864
$1 million +	603	3,088,329	970,172
All Tax Units	168,946	80,584	16,851

Table 2: Static Distributional Estimates of Romney Plan from TPC Report		
Cash Income Group	**Avg. Change from Romney Tax Plan**	**Avg. Tax Change from Base Broadening**
0-$30,000	183	946
$30,000-$50,000	431	2,009
$50,000-$75,000	641	2,672
$75,000-$100,000	884	3,627
$100,000-$200,000	1,339	5,855
$200,000-$500,000	-1,808	11,730
$500,000-$1,000,000	-17,136	24,370
$1 million +	-87,117	88,844
All Tax Units	0	3,234

Deriving the Dynamic Estimates for Changes in After-Tax Income from Romney Plan

The first step is to calculate what the average federal taxes paid amount would be under Romney's plan by simply adding the baseline federal taxes amount (Table 1) to the change under Romney's plan (Table 2). Then we can calculate the average federal tax rate under the Romney plan by taking the average taxes paid under Romney plan divided by the baseline pre-tax income estimates. These are all static figures; no dynamic adjustment has been made yet.

Table 3: Distribution of Data for Tax Year 2015 under Romney's Plan (TPC static estimates)		
Cash Income Group	**Avg. Federal Taxes under Romney Plan**	**Avg. Federal Tax Rate under Romney Plan**
0-$30,000	924	0.0567
$30,000-$50,000	5,885	0.1399
$50,000-$75,000	11,762	0.1793
$75,000-$100,000	18,547	0.1998
$100,000-$200,000	33,001	0.2268
$200,000-$500,000	72,869	0.2389
$500,000-$1,000,000	176,728	0.2434
$1 million +	883,055	0.2859
All Tax Units	16,851	0.2091

The next step is to perform the dynamic adjustment to the baseline pre-tax income figures, (i.e., "grow up" by some factor (i.e., 1%, 2%, etc.) the baseline pre-tax amounts.) As an illustration, Table 4 shows this dynamic effect assuming a 1% growth rate in pre-tax incomes. A 1% growth rate is used throughout this methodology (unless otherwise specified).

Table 4: Dynamic Adjustment of Pre-Tax Income (assuming 1% income growth effect)		
Cash Income Group	**Avg. Dynamic Pre-Tax Income Adjustment**	**Avg. Pre-Tax Income after Dynamic Adjustment**
0-$30,000	163	16,445
$30,000-$50,000	421	42,494
$50,000-$75,000	656	66,260
$75,000-$100,000	928	93,774
$100,000-$200,000	1,455	146,994
$200,000-$500,000	3,051	308,116
$500,000-$1,000,000	7,261	733,409
$1 million +	30,883	3,119,212
All Tax Units	$808	81,392

The third step is to estimate the dynamic revenue effects of the Romney plan given the assumed dynamic income adjustment. If pre-tax incomes grow, then tax revenue will increase due to the larger base. However, we must make an assumption about what average marginal tax rate would apply to that income. For simplicity, we assume that the average static rate from Table 3 would apply to that marginal "dynamic" income. Because marginal rates tend to be higher than average rates, this may suggest too small a dynamic revenue adjustment. However, given that Romney's plan would eliminate many tax preference items, average rates would move closer to marginal rates. The total tax revenue effect for each income group in Table 4 is simply the average dynamic revenue effect multiplied by the number of tax units for that income group from Table 1. Using the 1% growth rate when doing this aggregation, we can see that the dynamic revenue adjustment would total approximately $28 billion.

Table 5: Dynamic Revenue Effect from Higher Pre-Tax Incomes (assuming 1% income growth effect)		
Cash Income Group	**Avg. Dynamic Tax Revenue Effect from Tax Units in Group**	**Total Dynamic Tax Revenue Effect (billions of $)**
0-$30,000	9	0.61
$30,000-$50,000	59	1.78
$50,000-$75,000	118	2.83
$75,000-$100,000	185	2.76
$100,000-$200,000	330	7.88
$200,000-$500,000	729	5.14
$500,000-$1,000,000	1,767	2.10
$1 million +	8,831	5.32
All Tax Units	168	28.43

Because Romney's tax plan is revenue-neutral, he could use this additional dynamic tax revenue to further reduce taxes. For the purposes of this analysis, we assume that Romney's 20% marginal rate cut is fixed and that he would use this new dynamic revenue to reduce the amount of base

broadening in his reform proposal. Therefore, in Table 5 below, we distribute this total dynamic revenue effect of $28.43 billion shown in Table 4 to each cash income group using each tax unit's share of the base broadening tax increase shown in Table 2.

Table 6: Distribution of Dynamic Revenue Effect Back to Tax Units via Reduced Base Broadening (assuming 1% dynamic growth rate)	
Cash Income Group	**Avg. Additional Tax Cut due to Dynamic Revenue, Allowing for Reduced Base Broadening**
0-$30,000	49
$30,000-$50,000	105
$50,000-$75,000	139
$75,000-$100,000	189
$100,000-$200,000	305
$200,000-$500,000	610
$500,000-$1,000,000	1,268
$1 million +	4,622
All Tax Units	168

The final step in calculating the change in after-tax income is to include the direct gains to pre-tax income from the dynamic adjustment. That is, when pre-tax incomes increase due to the dynamic growth effects of the tax reform plan, after-tax income will obviously also increase (less some additional taxes paid by those tax units). Table 7 presents these figures. These are the final numbers presented in the primary report and are the net change in after-tax income from Romney's plan under a 1% growth effect. Specifically, the after-tax income figure is calculated by starting with after-tax income under the baseline, then subtracting the static tax change effect of Romney's tax plan as estimated by TPC, then adding the dynamic revenue tax cut effect from reduced base broadening, then adding the average growth in pre-tax income, and then finally subtracting the additional taxes paid on that new pre-tax income (the average tax revenue effect).

Table 7: Net Change in After-Tax Income from Romney Plan (assuming 1% dynamic growth effect)	
Cash Income Group	**Avg. Net Change in After-Tax Income from Romney Plan**
0-$30,000	20
$30,000-$50,000	35
$50,000-$75,000	36
$75,000-$100,000	48
$100,000-$200,000	91
$200,000-$500,000	4,740
$500,000-$1,000,000	23,898
$1 million +	113,792
All Tax Units	808

Discussion of Economic Welfare Gains from Romney Tax Reform Plan

A key point to make regarding the changes in after-tax income figures reported in the primary report and in Table 8 is that these figures are not changes in economic welfare. A 1% dynamic pre-tax income growth effect is simply assumed with no accounting for how that new income comes about. But growth in pre-tax incomes due to tax reform is caused by people changing their behavior, and using the net change in after-tax income for a group to obtain a welfare effect measure from tax reform would be improperly ignoring the opportunity cost.

For example, if one decomposed the source of the 1% growth, such additional pre-tax income could come from a variety of sources, such as higher wages on existing labor, income earned from new labor supplied due to the increase in higher after-tax wage rates, greater saving and investment resulting from higher after-tax rates of return, and/or new income reported that was previously hidden in tax shelters.

Additional income earned from new labor supplied is not entirely a welfare enhancement. That is, if the growth from Romney's tax plan causes people to earn greater incomes partly because they work more hours, then those tax units are losing leisure hours. On net, it would be positive for those units to work those additional hours (via revealed preference), but it is possible that for some, the higher after-tax wage rate could "barely" push them over the labor-leisure line, thereby adding very little to their economic well-being despite the realized increase in after-tax income.

Similarly with regards to saving and investment, if people respond to the tax reform by increasing saving, then the net gain is not entirely the additional capital income earned in future years. That is because they have foregone present-day consumption (the opportunity cost). The change in tax treatment could “barely” push them over the save-consume line into additional saving, which adds to long-term economic growth, but does not increase economic welfare by a dollar-for-dollar change in after-tax income. Finally, if new income is reported that was previously held in tax shelters as the owner now decides that the expected gains to removing it out of the shelter are greater than the expected costs of keeping it in the shelter (including possible legal costs), then the gain to the owner of that tax shelter is not equal to the entire amount now reported. That is because he/she loses the shelter’s benefit. It is true that such previous shelter income “coming out” could have a positive supply-side effect on U.S. workers’ wages, which would increase welfare for existing labor.

A 0% growth effect, as assumed by the Tax Policy Center report, implies that 100 percent of the after-tax income gain is a welfare gain because there was no change in behavior. It is simply a windfall or lump-sum tax change for taxpayers. On the other hand, a 3% growth effect would require a relatively large change in behavior, implying that a smaller fraction of the new income

would be a welfare gain. (A 3% growth rate would require greater labor supply and thereby less leisure.)

If one simply assumes that half of the pre-tax income gain is a welfare enhancement, then the required growth rate in pre-tax incomes that would assure low-and-middle-income groups to receive a net welfare benefit from Romney's plan (as a group) would be around 1.5-1.6 percent.