

# **UNDERSTANDING THE DYNAMICS OF DECLINING DISABILITY RECEIPTS IN NEW YORK STATE**

**2008**

**International System dynamics Conference**

**By**

**Roderick H. MacDonald, Ph.D**

Initiative for System Dynamics in Public Sector  
Center for Policy Research  
Nelson A. Rockefeller College of Public Affairs and Policy  
University at Albany, State University of New York

Milne 300, 135 Western Ave.  
Albany, NY 12222  
U.S.A.  
rod@isdps.org

**and**

**Hyunjung Kim, Ph.D Candidate**

Department of Public Administration and Policy  
Nelson A. Rockefeller College of Public Affairs and Policy  
University at Albany, State University of New York

Milne 110, 135 Western Ave.  
Albany, NY 12222  
U.S.A.  
[hk8459@albany.edu](mailto:hk8459@albany.edu)

**ABSTRACT**

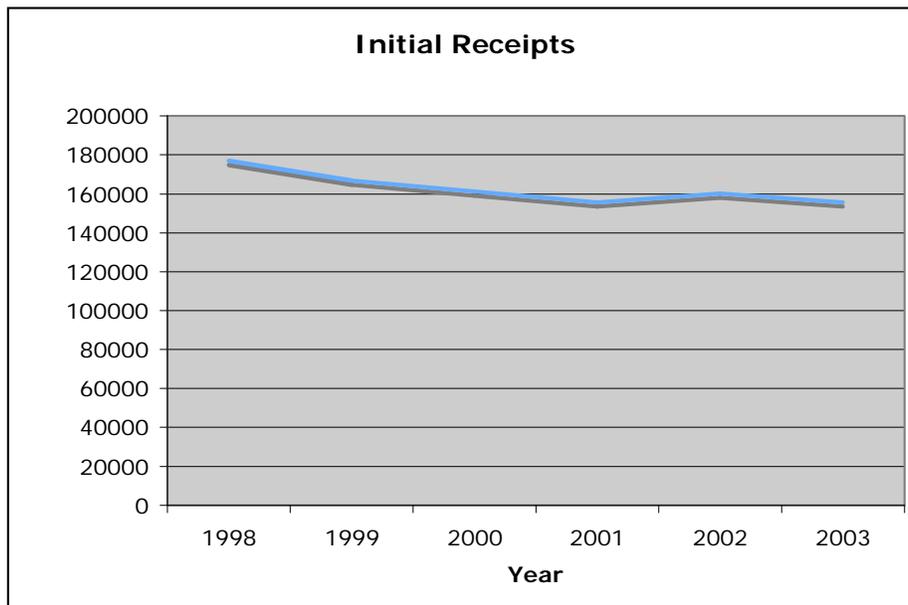
Under the auspices of the New York State Office of Temporary and Disability Assistance (OTDA), the Division of Disability Determinations (DDD) adjudicates New York's Social Security Disability (SSD or Title II) and Supplemental Security Income (SSI or Title XVI) claims according to the requirements of the Social Security Administration (SSA). Over the past few years, DDD has moved from a demand environment to a planned environment to facilitate a responsive rather than reactive approach to workload changes. This report presents the findings of a study that was conducted to examine why the number of initial disability receipts received by DDD has been decreasing since 1998. To accomplish the study, a system dynamics computer simulation model was built to explore various theories that have been put forth as reasons for the decline.

## BACKGROUNDS

Under the auspices of the New York State Office of Temporary and Disability Assistance (OTDA), the Division of Disability Determinations (DDD) adjudicates New York's Social Security Disability (SSD or Title II) and Supplemental Security Income (SSI or Title XVI) claims according to the requirements of the Social Security Administration (SSA). Since fiscal year 1998, the number of New York State-based initial claims received by DDD has been on a downward trend, dropping from 177,000 in FY1998 to 155,000 in FY2003 (Graph 1). The decline in New York State claims has been occurring while claims in other states have been increasing. This was a perplexing phenomenon since several factors currently being experienced would be expected to increase claims. These factors include:

- Current economic downturn
- Policies instituted through welfare reform, specifically the limiting of benefits to five years
- Events of 9/11, which one might anticipate would trigger an upsurge in claims for both mental and physical injuries

Given the experience of other states and the reasoning behind the anticipated increase in claims, it was surprising that New York State claims have declined.



**Graph 1: New York State Initial Receipts Received by DDD**

The decline in New York State-based claims for Title II and XVI benefits can be viewed as beneficial, since it suggests a lower level of injury and illness among NYS residents than in previous years. However, the decline has implications for the allocation of DDD's resources, including workforce planning. Currently, since New York State-based claims have been decreasing and claims in other states have been increasing, SSA has accepted DDD's offer to assume claims from other states to help meet national production goals.

While this demonstrates DDD's capability to meet or exceed its own production goals and to leverage the expertise and technology of its operation to assist SSA in providing the best possible service to claimants across the nation, it highlights the importance of being able to predict caseload trends.

To maximize the use of its workforce, NYS needs to better predict its caseload trends so that reductions in NYS-based cases can be used not only as an opportunity to assist other states in meeting production goals, but also to continue reinvestment in staff through training and development. However, in order to continue to effectively address future workloads and optimally allocate resources, NYS needs to identify the factors that are causing its workload to behave differently than the rest of the nation.

To continue providing efficient and effective resource allocation, a primary goal of DDD is to develop and implement a more defined strategy to project future workloads. With respect to staff reinvestment, New York State-based examiners initially go through an extensive training process, followed by a mentoring process, before becoming fully productive members of the DDS workforce. This up-front investment in staff results in more productive and efficient employees in the long-run. Since the current DDD workforce is aging, with many baby boomers in management and core analyst positions eligible for retirement in the next 5 to 10 years, the ability to maintain an educated, motivated, and stable workforce will be very important in order to meet the operational needs of the future.

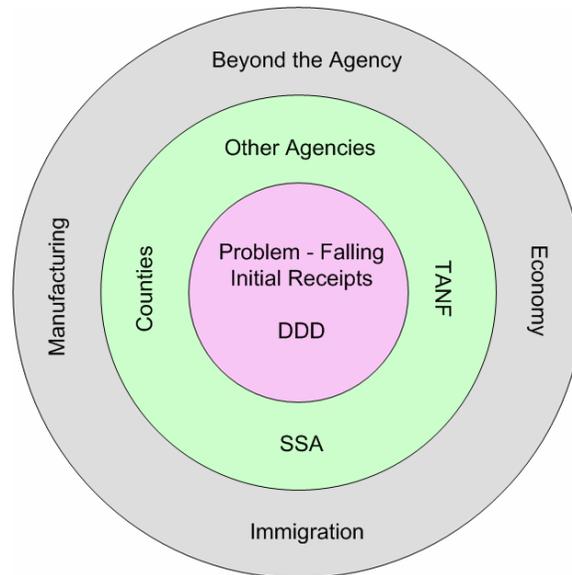
Simply stated, the problem faced by DDD is: Why has the number of initial receipts in New York State been falling? This paper presents the findings of a study that was conducted to examine the question by using system dynamics modeling.

## **DATA AND MODEL BOUNDARY**

The computer simulation model was developed during fall 2003 and spring 2004 with assistance from DDD staff, the Temporary Assistance Unit of the Office of Temporary and Disability Assistance, and various Social Security Administration Field Offices. The model uses the data historically collected by DDD, data available from public sources, previous reports prepared by DDD, and discussions with participants from DDD, SSA and the Temporary Assistance Unit of OTDA knowledgeable about the functions of their departments and agencies. These discussions resulted in a model that focused on the role of market saturation (the total number of initial claims filed over time compared to the population), manufacturing jobs leaving the state, the role welfare played in feeding people into the disability system, and the role of SSA proactive outreach in bring people into the system. This list is not meant to be exhaustive, but is used to focus resources and time on those theories of influences on initial claims that seemed most promising in explaining the behavior of initial receipts to DDD over time.

The system dynamics approach places an emphasis on examining feedback-oriented explanations for the decline in initial receipts. Figure 1 identifies the problem and

boundaries that were examined using the model. The problem at the center of this study is that of falling initial receipts. As one moves out from the center of Figure 1, the ability of DDD to control those factors that influence initial receipts becomes weaker and weaker. The ability to control the “gray area” is weak, but as you move in toward the problem DDD has more influence.



**Figure 1: Problem and Boundaries**

## **THEORIES BEHIND DECLINE IN INITIAL RECEIPTS**

A brief description of five components of the model’s structure is provided below. Each component focuses on a potential theory or explanation for falling initial receipts. These potential theories were derived from discussions with professionals in the field, including staff in various field offices, and from a review of available data pertinent to the issue. Initialized with the historical number of initial receipts, the model was used to explore the effect that factors related to SSA proactive outreach, welfare reform, manufacturing jobs, influence of other applicants, and market saturation.

### **1) Social Security Administration Proactive Outreach**

Historically, the Social Security Administration’s (SSA) field offices have conducted efforts to reach out to potential disability recipients. These efforts have traditionally involved at least one staff member in each SSA field office who was responsible for going out into the field to explain programs and eligibility guidelines for those programs. This outreach effort has focused on identifying potential beneficiaries in a variety of locations and collecting information from them that could be used to initiate the application process for benefits. However, increased demands on staff have modified the

focus. Currently, outreach efforts focus on providing information to organizations about program benefits and eligibility requirements as requested by those organizations, rather than focusing directly on identifying potential recipients.

The structure developed to incorporate the concept of proactive outreach into the model is shown graphically in Figure 2. Based on discussions with SSA field offices in New York City, Figure 2 captures the idea that on average the SSI disability claimants in New York City tend to be more transient, requiring additional staff effort to verify eligibility criteria. This has resulted in a more complex application process in the New York City field offices, compared to other offices across the state as well as in other parts of the country. This facet, the complexity of completing a claim in New York City, was exacerbated by the attack on the World Trade Center and resulting economic pressures. The difficulty faced by the New York City field offices to meet the national productivity goals with limited resources resulted in a number of feedback effects. It required staff of the New York City field offices to spend more time performing functions that would directly affect productivity. This resulted in the reduction of proactive outreach activities to potential disability clients, which is captured in the feedback loops labeled B3 and B4 in Figure 2.

New York State has 85 SSA field offices, with 44 located in New York City, Nassau and Suffolk counties, and the remaining 41 located throughout the rest of the State. Although some field offices reported substantial losses in staffing levels over the past decade, the total number of field office staff for New York State declined by less than eight percent between 1994 and 2004, dropping from 2,420 in 1994 to 2,232 in 2004.

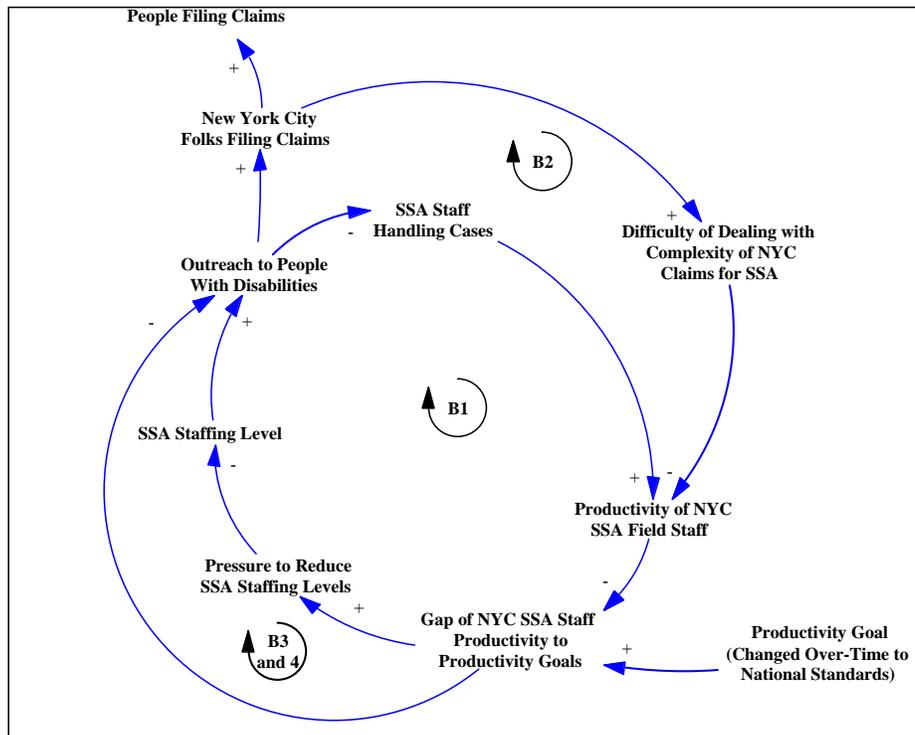
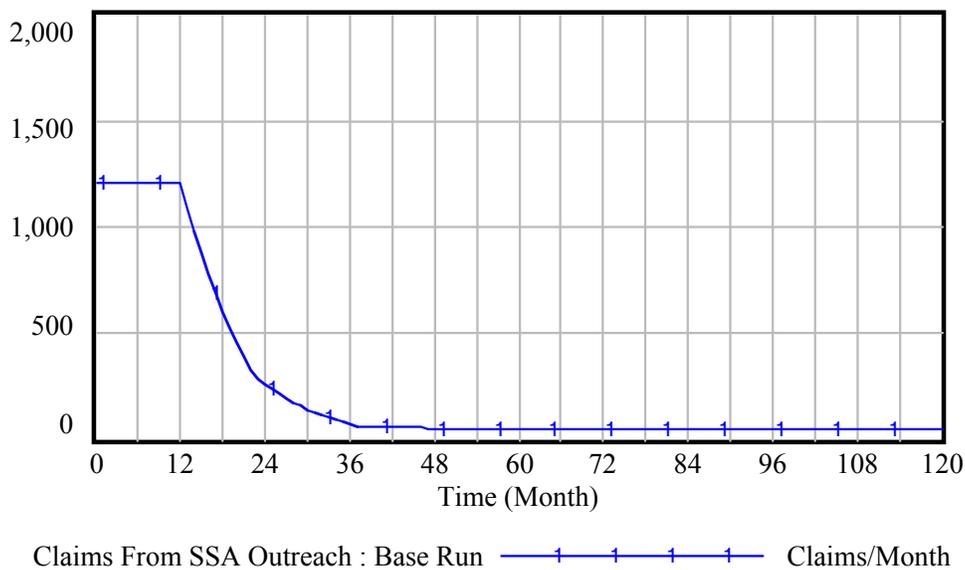


Figure 2: Feedback Loops for SSA Field Offices

Although data were available on the number of field staff statewide, data were not available with regard to what has happened to SSA’s proactive outreach efforts in recent years. Hence, it was necessary to derive a reasonable estimate of this effort for use in the model. Expert opinion from the field indicated that a field officer performing proactive outreach could generate five claims per week. Based on expert opinion and the data available on staffing levels, the simulation model was built based on 121 SSA field office staff performing outreach activities, with each staff member generating 10 claims per month, which the modeler considered a conservative estimate. The 121 SSA field office staff represents approximately five percent of the total SSA staff in New York State, resulting in an average of 1.5 staff members per field office performing proactive outreach. Using these estimates, the computer simulation output for the number of claims generated by SSA’s proactive outreach efforts is shown in Graph 2.

Statewide, the model indicates that approximately 1,250 claims were generated in this manner per month. When SSA shifts staff to other activities in order to meet productivity standards, the number of referrals declines over a two-year period, reaching a much lower level. In sum, the model shows that while these outreach activities are not completely stopped, they have been drastically reduced.



**Graph 2: Claims from SSA Proactive Outreach**

As indicated above, the model structure pertaining to SSA’s proactive outreach efforts was based on the expert opinions of field office staff and known data on the number of field office staff statewide. In interpreting the model’s output, the reader should keep in mind that a reduction in outreach activity 1) can only be as great as the outreach performed and 2) does not preclude those people who would have been contacted in this manner from filing an initial claim.

Although the exact number of claims generated by SSA through proactive outreach is not known and the estimate in the model can be debated, it is important to note that regardless of the estimate used, the model clearly indicates that the decline in the number of claims initiated through proactive outreach efforts lasts approximately two years and stabilizes at a much lower level. This outcome supports the theory that a reduction in proactive outreach efforts has had a significant impact on the number of initial claims submitted.

## 2) Welfare Reform

The welfare system was substantially changed with the passing of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA).<sup>1</sup> In short, the historical welfare system was changed, a 60 month time limit for benefits was introduced, and the financing of the system was shifted to a block grant. Historically, welfare recipients were required by caseworkers in the Departments of Social Services to apply for disability benefits. If applicants for social services (welfare) were found eligible for disability benefits, the State would save money. With the introduction of PRWORA and TANF (Temporary Assistance to Needy Families), the financing of welfare changed so that the immediate financial incentive of shifting people from welfare was somewhat decreased. Furthermore, organizational changes occurred that increased the caseload of social workers as they had to learn about the new rules and regulations.

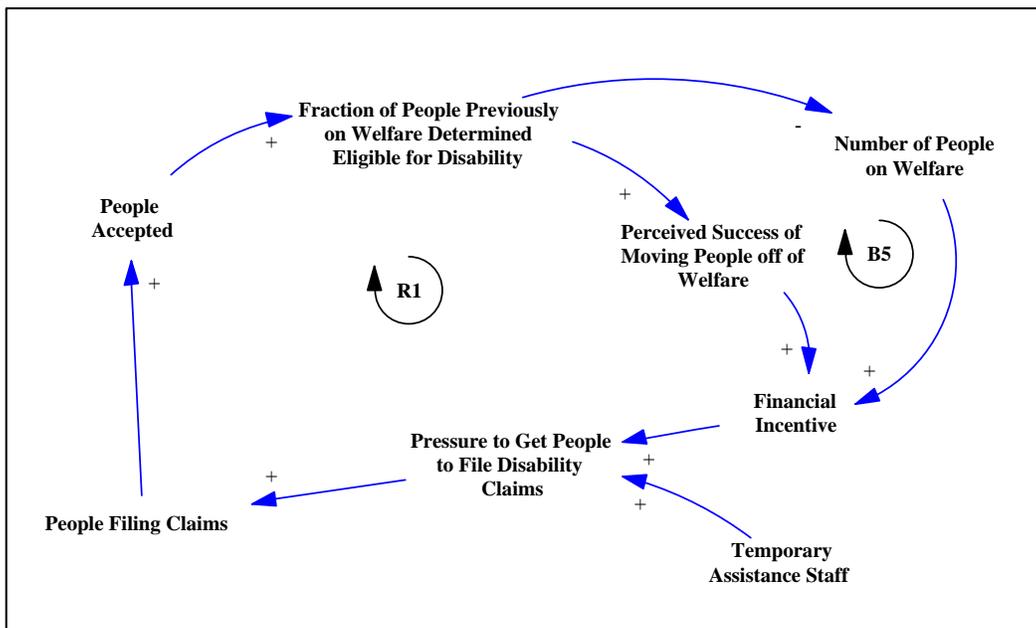
Based on information gathered in discussions with the staff of the OTDA Division of Temporary Assistance (DTA), the structure developed to incorporate the effects of welfare reform into the model is depicted in Figure 3. As shown in Figure 3, the R1 feedback loop, a positive loop that will continue to either grow or decline if not influenced by anything else, captures the concept that as more people are moved from the welfare rolls to Social Security Insurance disability programs, there will be more incentive to continue with this activity. People are moved and money is saved, which provides the incentive to continue with this activity. However, if fewer and fewer people are moved from welfare to disability programs, the incentive to do so is lost, since not as much money is saved as in previous times. The changes in the welfare program have decreased the financial incentives from the R1 feedback loop, resulting in the elimination or breaking of that loop. Referrals from the pool of people on the welfare rolls were significantly diminished.

The B5 loop captures the concept that as more people are moved off the welfare rolls, the pool of people available to move off welfare is decreased. If all other things are held equal, those remaining will be more difficult to move to disability programs.

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<sup>1</sup> The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) is the welfare reform law that established the Temporary Assistance for Needy Families (TANF) program. TANF is a block grant program aimed at moving welfare recipients into work thereby making welfare a temporary assistance program. TANF replaced Aid to Families with Dependent Children (AFDC) established under Title IV of the Social Security Act of 1935. States were required to meet maintenance of effort levels including funding for training and child care to move recipients to work. (<http://www.acf.hhs.gov/programs/ofa/exsumcl.htm>).

Furthermore, other factors, which are not shown here, also result in an elimination of the “Number of People on Welfare” shown in Figure 3.

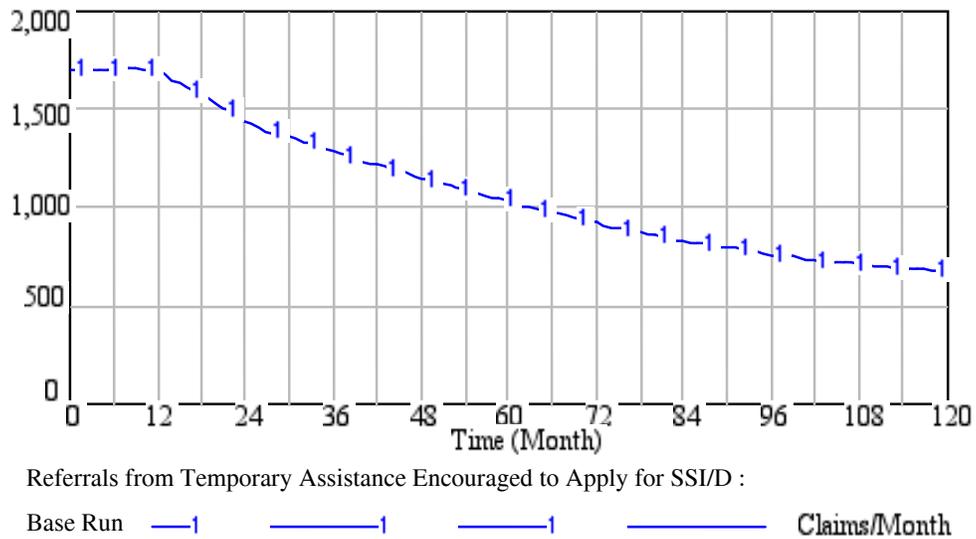


**Figure 3: Welfare Reform**

Referral sources for people applying for disability were never recorded. Although the DTA encourages the filing of disability claims, where appropriate, welfare caseworkers have heavy caseloads. In addition, they are dealing with a relatively new set of rules and regulations and view the acceptance rate of disability claims so low that they do not encourage applicants to apply as they once had.

In the model, the Historical Fraction of Temporary Assistance Recipients Referred to DDD was set at .001 per month. This generated approximately 1,700 referrals to disability per month. Graph 3 shows the model decline in referrals per month from those on welfare to DDD.<sup>2</sup> This estimate is based on the modeler’s discussions with people familiar with the system. The actual decline in referrals from welfare can be attributed to welfare case officers losing the incentive to make referrals and the decline in actual welfare recipients in the system. With the introduction of PRWORA, the welfare rolls have been reduced by half, from approximately 1.5 million to 750,000. Even if temporary assistance caseworkers had continued to push referrals, the actual number of referrals would have declined due to the reduction in the welfare rolls. Graph 3 also indicates that the decline in initial referrals from temporary assistance recipients or applicants will level off at some point. When the referrals are substantially reduced and the system loses knowledge of making these referrals, a new equilibrium is achieved.

<sup>2</sup> See Appendix II for an explanation of the numbers used in this section.



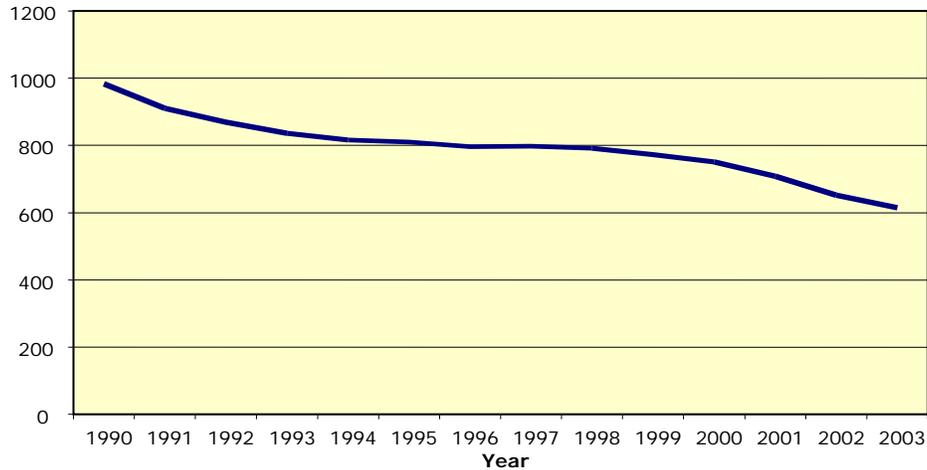
**Graph 3: Referrals from Temporary Assistance (TANF)**

The results of the model simulation show a sizeable decline in the number of initial claims generated by referring clients from welfare. This occurs primarily for two reasons. One, the enactment of PRWORA has resulted in a 50 percent reduction in the total number of welfare clients in the system. Second, primarily due to heavy caseloads, welfare caseworkers have little incentive to make such referrals. Although overall caseload has decreased, individual caseloads remain high and it can be complicated moving clients from welfare to work. In sum, the model clearly indicates that the decline in the number of claims initiated through welfare referrals has likely contributed significantly to the overall reduction in initial claims. This outcome supports the theory that welfare reform changes have had a significant impact on the number of initial claims submitted.

### 3) Manufacturing Jobs

The number of manufacturing jobs in New York State has been declining for decades. Since 1990, New York State has lost approximately 400,000 manufacturing jobs (Graph 4). One of the driving forces behind disability claims is manufacturing jobs. This occurs because manufacturing jobs typically require strenuous physical activity and may not require more than limited education in order to perform the work required. They also foster the development of skills that are not easily transferable to other industries. The strenuous physical activity leads to physical stress that may become disabling over time. The lack of education and the inability to perform the tasks required of previous jobs tends to lead people with work histories in manufacturing, particularly as they age, to file for disability at a rate higher than for other industries or professions. Therefore, the fall in manufacturing jobs was expected to have two effects. First, as people lose their jobs and are unable to find similar work, they would be expected to turn to disability programs

as a means of generating income. Second, with fewer manufacturing jobs available, fewer people would be working in the physically stressful environments that generate a higher proportion of disabilities, compared to other industries.



**Graph 4: Number (in thousands) of Manufacturing Jobs in NYS 1990-2003**

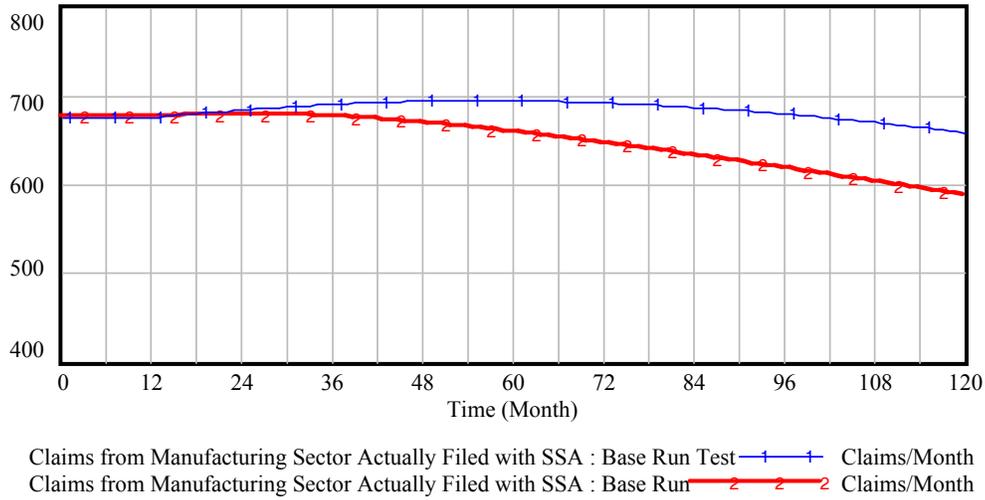
The model was structured to capture the actual loss of manufacturing jobs over time. Graph 5 shows the model-generated output for the loss of jobs in New York State between 1990 and 2003. Assumptions in the model did not allow people who lost their manufacturing jobs to migrate out of the state. In and out migration of New York State is common and census data indicates that a large portion of migration into New York State is the result of foreigners entering the state. However, it also indicates that New York City tends to be a point of entry and that many immigrants<sup>3</sup> stay there temporarily and then move on to other parts of the country. Many New Yorkers also migrate South, but information about who is actually migrating is not available. In the model, manufacturing job loss was not linked to migration. Essentially the pool of prospective applicants with a work history in the manufacturing industry does not decrease with job loss. These individuals remain in NYS, seek other forms of employment, and remain part of the pool.

Graph 6 shows two simulation runs of the Pool of Potential Manufacturing Claims. In the base run, people leave the state when they lose their jobs; in the base run test they remain in the state when they lose their jobs. The behavior in both cases is similar in that a decline occurs in the Pool of Potential Manufacturing Claims. Over time people age out of the system. Numerical differences occur in that the Pool of Potential Manufacturing Claims becomes smaller sooner when people leave the state.

<sup>3</sup> Census data on immigration ([www.census.gov](http://www.census.gov)) places New York State fourth in the number of foreign born residents behind California, Texas, and Florida.



in the base run test where people who have lost their job remain in New York State, is a function of New York’s aging population.



**Graph 7: Claims from Manufacturing Sector Filed with SSA**

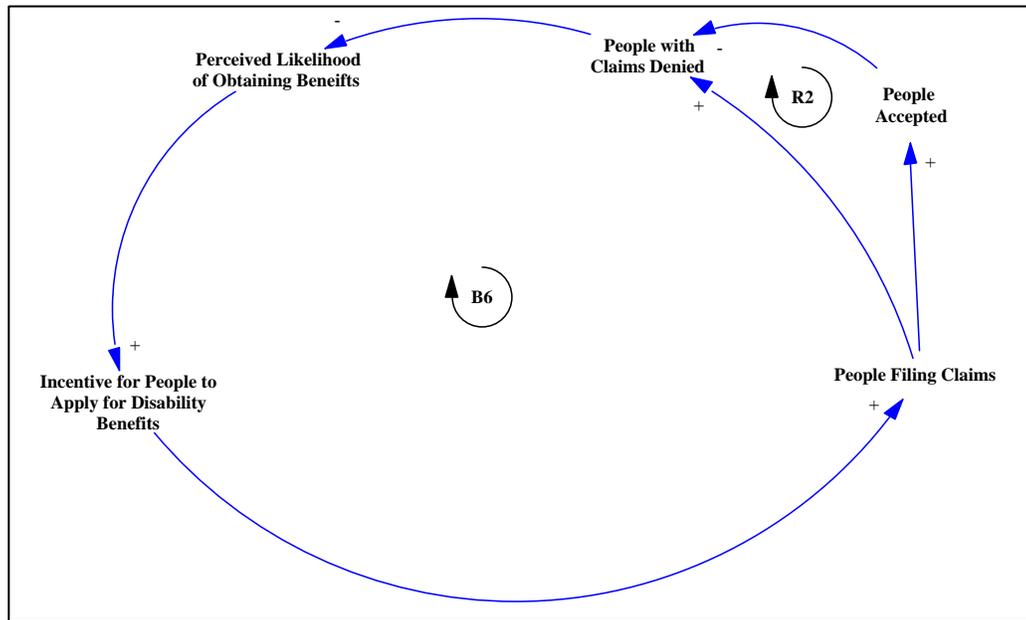
While the economy in recent years would have been expected to result in fairly large increases in the number of initial claims, an examination of the effect of manufacturing jobs on claims does not support this theory. Rather, the model indicates that only a small increase in the number of initial claims occurs, and then only after several years. The model further indicates that the small increase is primarily due to the aging of people in the manufacturing sector. These findings suggest that the loss of manufacturing jobs in New York State has had only a moderate effect on the decline in the number of initial claims in recent years.

**4) Influence of Other Applicants**

Discussions with professionals in the field suggested that potential applicants for benefits are sometimes influenced by what they know of the experience of other applicants. They theorized that a portion of potential applicants are more likely to apply for benefits if they know other applicants who have been successful in obtaining benefits.

The model structure developed to explore the effect of the influence of other applicants is shown in Figure 4. Figure 4 captures the idea that information about the likelihood of receiving benefits would influence the decision of people to apply. If changes somewhere else in the system resulted in more “People Accepted,” more people would be likely to apply. All other things being equal, more “People Filing Claims” would result in more “People Accepted.” This is a positive feedback loop that will continue to move in the same direction unless influenced by some other loop.

Figure 4 also contains the balancing loop B6 that captures the notion that as more people are denied, fewer people who think they may be eligible end up applying. As fewer people apply, the “People with Claims Denied” will decrease and the feedback loop settles down into a new equilibrium.



**Figure 4: Influence of People Receiving Benefits**

Although the information received from other people receiving benefits had only a very small effect on potential new recipients, the feedback loop shown in Figure 4 could become more important as more people enter the system and others receive information about disability benefits.

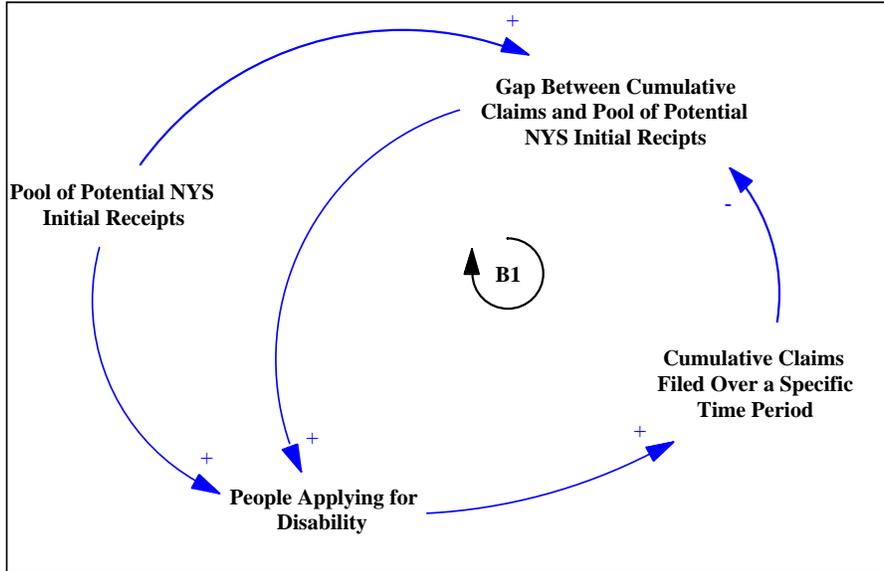
### 5) Market Saturation: Pool of Potential Disability Recipients

The pool of potential disability recipients is extremely important to the simulation model and to the number of initial receipts being received by DDD. Dwyer et al. (2001) reported that approximately 2.9 percent of the non-beneficiary population between the ages of 18 and 64 would meet SSA medical disability criteria<sup>4</sup>. The model incorporated feedbacks that captured the concept that market saturation for initial receipts could occur. The idea was that a percentage of the population would be likely to file an initial receipt and that over time, if enough of these people filed claims, the pool of people remaining who had not filed claims would become smaller. As that pool became smaller, it would be more difficult to get these people to apply.

The model structure developed to explore the effect of market saturation on initial claims

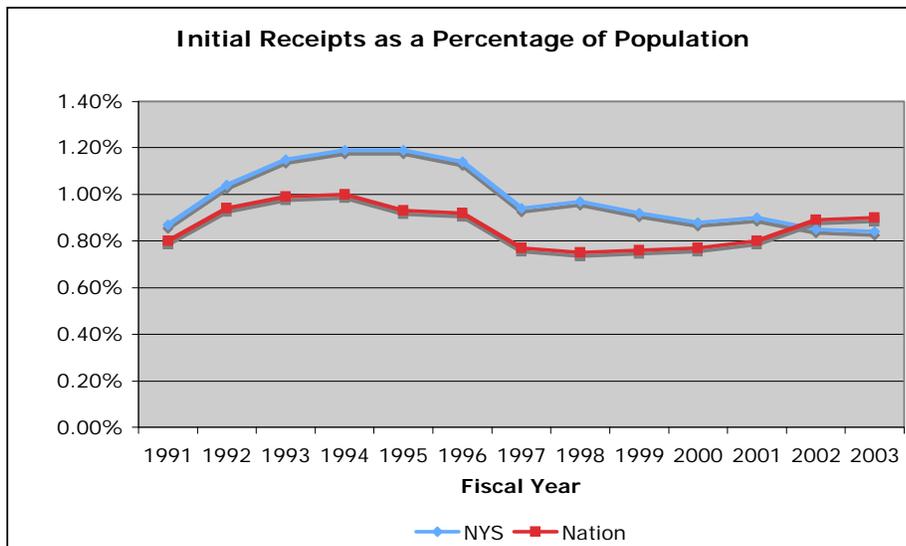
<sup>4</sup> The work of Dwyer et al. is on the 1990 panel of the Survey of Income and Program Participation. These are self-reported surveys about medical conditions and disability.

is depicted in Figure 5. As shown in Figure 5, the balancing feedback loop (B6) indicates that as the cumulative number of people who have applied grows, relative to the pool of potential receipts, the reduction in this gap decreases the number of people who actually apply. The extreme condition would be that if all the people in the state who had a potential disability applied this year, the number applying next year would be expected to be smaller since only those people applying for a second time, people whose condition had deteriorated, and people whose disability had just arisen would be eligible.



**Figure 5: Market Saturation Loop for Initial Receipts**

Graph 8 shows actual data that compares the percentage of New York State’s population that has applied annually for disability to that of the entire U.S. Historically, New York State has had a higher percentage of its population apply for SSI/SSD benefits.



**Graph 8: Initial Receipts as a Percent of Population**

The concept that a pool of eligible people exists in New York State is a key concept in the model. This pool is a function of a number of factors, some of which are a function of the overall population and level of medical care. It is assumed that these would be constant for all states. A certain percentage of the population is born with disabilities, while another portion becomes disabled through disease or injury. Furthermore, people becoming disabled through non-work related accidents should also be the same from state to state given the size of their population. People becoming disabled after years of manual labor would be a function of a state's economy and manufacturing base and would vary from state to state based on these factors. The condition of a state's economy would also be important as a slow economy may push people out of work, resulting in a portion of these people having an incentive to apply for disability as an alternative source of income.

The implications for market saturation are moderate in the model. However, actual data indicate that New York State has historically had a higher percentage of its population applying for disability than the nation as a whole. Incorporated in the model is the idea that a pool of potential applicants exists and as you get to the bottom of that pool, people will be less willing to apply for disability. This scenario is labeled "market saturation" to capture the idea that after a certain point obtaining additional market share becomes more difficult.

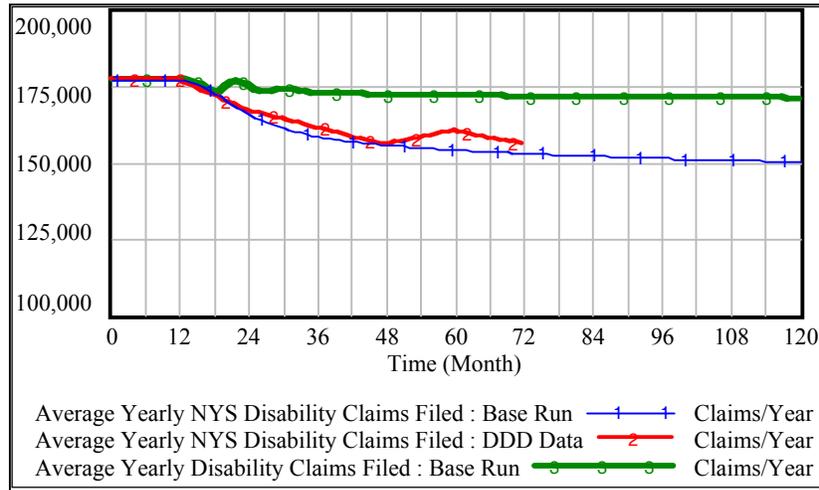
## **DISCUSSION AND SUMMARY**

The computer simulation model for this study was developed based on a review of the available data and the information gathered in discussions with experts responsible for different parts of the system. Graph 9 shows that the simulation model captures the historical decline in initial receipts in New York State. The red line in Graph 9 represents the historical data for the Average Annual NYS Disability Claims filed, while the blue line reflects the data generated by the model. Although the two lines are not identical, they are very similar supporting the validity of the model.

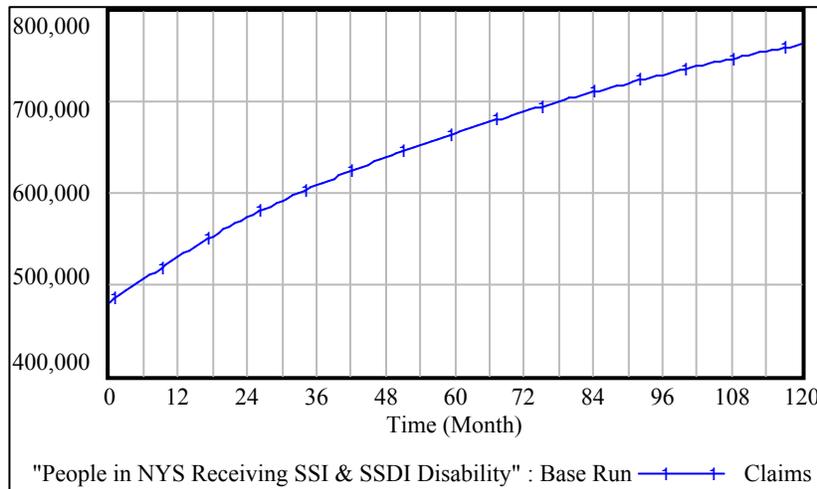
Using the model to examine the effects of the five theories described above, the key finding supports the dynamic hypothesis that attributes the decline in initial receipts to the fall in the number of manufacturing jobs, market saturation for disability claims, and the decline in proactive outreach on the part of SSA field offices and welfare caseworkers. The model further indicates that the decline attributed to SSA field offices and welfare caseworkers reaches a new equilibrium in approximately 5 years and has no further negative effect. However, simulation runs that allowed the decline in manufacturing to continue resulted in a continued gradual decline in the number of initial claims.

In addition to these key findings, the model also shows that despite a decline in the number of initial receipts, the number of people receiving SSI and SSDI benefits will continue to increase for a number of years, reaching a peak of just under 800,000 in approximately 10 years. This continuing increase stems from the fact that the number of

people entering the system is greater than the number of people leaving the system. People leave the system in three ways: 1) their case is reviewed and they are determined to no longer be eligible; 2) they reach the “aged” category; or 3) they die. Even with the reduced number of initial receipts and a relatively constant allowance rate, the number entering the system is greater than the number leaving the system. With new initial receipts leveling off at approximately 150,000, the outflow of people takes years to reach this level. Furthermore, the average age of recipients in the model was taken from historical information that indicated that the average age of recipients in New York State is 51 years. If the average age of recipients falls, the time it takes for people to age out the system would increase, which would reduce the outflow and thus increase the number of people receiving SSI and SSDI benefits.



**Graph 9: Average Annual Initial Receipts (Actual and Simulated)**



**Graph 10: People in NYS Receiving SSI and SSDI Disability Benefits**

As initial claims fell, DDD proactively planned for this change in two key areas. First, the workload of analysts was increased by bringing in cases from out-of-state to make up for the short-fall within New York State. The model included structure that captured this. The green line in Graph 9 shows the variable labeled Average Annual Disability Claims filed that captures both in-state and out-of-state initial receipts. The green line oscillates initially as time delays in the system require that decisions to bring in out-of-state claims are made only after the number of in-state claims fall. Bringing in out-of-state claims maintains a stable workflow. Second, DDD is working with DTA to target recipients most likely to be eligible for disability assistance.

Increasing the proactive outreach by both SSA and OTDA may increase the number of initial receipts, but their systems and workforce levels have changed. Shifting clients from TANF to disability would reduce the workload of TANF caseworkers and would improve the system, if all other things were held equal. For SSA field offices to perform outreach, they would have to shift people from tasks they are currently performing or hire new staff. If they shifted people from their present duties, it is possible that people would have to begin waiting longer to file disability claims. Longer wait time could result in the attrition of the number of people who do not want to or cannot wait.

Finally, during the course of this study, it became readily apparent that information about who is directing people to file initial claims to SSA for disability benefits would be very useful in targeting the limited resources associated with the disability programs. Since such data are not currently available, consideration should be given to collecting these data in the future.

**APPENDIX I. MODEL PARAMETERS**

*(will be updated)*

**APPENDIX II. MODEL STRUCTURE AND EQUATIONS**

*(will be updated)*