

REPORT

2003 Assessment of the William S. Lee Tax Act

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This report was prepared under contract for the North Carolina Department of Commerce. However, the author is solely responsible for any conclusions about policy that may be derived from the findings, and for any errors of fact or interpretation.

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2003 Assessment OF THE WILLIAM S. LEE ACT¹

This report was prepared for the North Carolina Department of Commerce in response to the General Assembly's requirement to conduct a biennial assessment of the William S. Lee Act (originally passed in the 1996 North Carolina legislative session as Chapter 105, Subchapter I, Article 3A, entitled "Tax Incentives for New and Expanding Businesses").

The report is organized into four further sections: a general background, a summary of the Act's provisions and a review of changes since the last report to the legislature, an overview of the Act's costs to the state, and a discussion of the data issues that are now being resolved.

BACKGROUND

The William S. Lee Tax Act was originally passed in the 1996 North Carolina legislative session as Chapter 105, Subchapter I, Article 3A; the title of the Article was "Tax Incentives for New and Expanding Businesses." The intent of the law was to create "widely shared prosperity" in the state and help it compete better with other states for new and expanding jobs. The General Assembly, in ratifying the legislation, expected it to increase investment, employment, and wages in North Carolina and, in particular, its more distressed areas.

The General Assembly made credits under the Act available to taxpayers engaged in different types of businesses, which today include:²

- manufacturing and processing
- warehousing and distribution
- data processing
- air courier services
- central administrative functions or aircraft facilities

Omitted from this list are many professional and business services, including financial; agriculture and other natural resource-based activities; and transportation, utilities, and communications.

To ensure that the credits are not encouraging the creation of particularly low-paying jobs, the credits are made available only when the wages paid in those businesses are equal to the prevailing average weekly wage in "tier 1" counties (i.e., the most distressed; see below) or 10 percent higher than the average weekly wage in the other tiers.

The Act now provides credits for five types of activities:

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² Air courier, central administrative functions, aircraft facilities, customer service centers, computer services, and electronic mail order houses were all added subsequent to the ratification of the original bill. Effective January 1, 1999, warehousing and distribution were relabeled manufacturing/warehousing and wholesale trade

- creation of jobs
- investment in machinery and equipment
- expenditures on research and development
- outlays for worker training
- expansion of central administrative office property or aircraft facilities that are hubs of a passenger airline.

The credits available for each type of activity are limited. Taxpayers wishing to claim the credits must request certification from the Department of Commerce (DOC) in the tax year in which they plan to file for the credits; that typically occurs *after* they have engaged in the credit-eligible activity. They also are required to document their activity when they file their tax return with the North Carolina Department of Revenue (DOR).³ Then, they receive the credits in subsequent years. The consequence of this sequence of steps is that the state enjoys any benefits of induced new jobs and investment one to two years before the business receives any tax credits.

A key feature of this legislation is the different tax treatment of activity in more-distressed counties (based on placement within “tiers”). For all activity, except research and development (R&D), taxpayers receive more tax credits for their operations in more economically distressed counties. The tier configuration of the state changes year-to-year. Table 1 indicates the placement of counties in tiers from 1996 to 2003, with the years covered by this report (2000 and 2001) shaded gray.⁴

³ Until December 31, 2002, certification for the Lee credits was by the NCDOC. Now, taxpayers may request an advisory ruling on their eligibility from DOR.

⁴ As part of the 2003 contract, the Office of Economic Development completed an assessment of the tier approach used in North Carolina.

Table 1: County Tier Designation, by Year

	1996	1997	1998	1999	2000	2001	2002	2003
Alamance	4	4	4	4	5	5	5	5
Alexander	5	4	4	4	4	5	3	3
Alleghany	3	1	1	2	1	1	1	1
Anson	2	1	1	2	2	2	2	2
Ashe	3	2	2	2	1	1	1	3
Avery	3	3	3	3	3	3	3	3
Beaufort	2	2	2	2	1	1	1	1
Bertie	1	1	1	1	1	1	1	1
Bladen	2	2	2	3	2	2	2	1
Brunswick	3	3	3	3	4	4	4	4
Buncombe	5	5	5	5	5	5	5	5
Burke	4	4	4	4	4	4	4	3
Cabarrus	5	5	5	5	5	5	5	5
Caldwell	4	4	4	4	4	4	4	4
Camden	3	3	3	3	1	1	1	3
Carteret	4	4	4	4	4	4	4	4
Caswell	3	3	2	3	3	3	3	3
Catawba	4	4	4	4	5	5	5	5
Chatham	5	5	5	5	5	5	5	5
Cherokee	3	2	2	2	1	1	1	2
Chowan	3	3	3	3	3	3	3	3
Clay	3	3	2	3	1	1	1	3
Cleveland	4	3	3	3	3	3	3	3
Columbus	2	2	2	2	1	1	2	2
Craven	3	3	3	4	4	4	4	4
Cumberland	4	4	4	3	3	3	4	3
Currituck	5	5	5	5	3	3	3	3
Dare	4	4	4	4	3	4	3	3
Davidson	5	5	4	4	4	5	5	4
Davie	5	4	5	5	5	5	3	5
Duplin	4	4	4	4	3	2	2	2
Durham	5	5	5	5	5	5	5	5
Edgecombe	2	1	1	1	1	1	1	1
Forsyth	5	5	5	5	5	5	5	5
Franklin	4	4	4	4	4	4	5	5
Gaston	4	3	3	3	4	3	3	3
Gates	3	3	3	3	3	3	3	1
Graham	1	1	1	1	1	1	1	1
Granville	4	4	3	4	4	4	4	4
Greene	4	4	4	4	3	3	2	2
Guilford	5	5	5	5	5	5	5	5
Halifax	2	1	1	1	1	1	1	1
Harnett	4	4	4	4	4	4	4	4
Haywood	3	3	3	3	3	3	3	4
Henderson	5	5	5	5	5	5	5	5
Hertford	1	1	1	1	1	1	1	1
Hoke	3	3	3	3	2	2	2	3
Hyde	1	1	1	1	1	1	1	2
Iredell	5	5	5	5	5	5	5	5
Jackson	3	3	3	3	3	3	3	3

	1996	1997	1998	1999	2000	2001	2002	2003
Johnston	5	5	5	5	5	5	5	5
Jones	3	3	3	3	1	1	1	1
Lee	5	5	4	5	5	5	4	4
Lenoir	3	3	3	3	3	3	2	2
Lincoln	5	4	4	4	4	4	4	4
Macon	4	4	4	4	3	4	3	3
Madison	3	3	3	3	2	2	2	3
Martin	3	2	2	1	1	1	1	1
McDowell	3	2	3	3	3	3	3	2
Mecklenburg	5	5	5	5	5	5	5	5
Mitchell	1	1	1	2	2	2	2	2
Montgomery	2	2	2	2	2	2	3	3
Moore	5	5	5	5	5	5	5	5
Nash	4	4	4	4	4	4	3	4
New Hanover	5	5	5	5	5	5	5	5
Northampton	1	1	1	1	1	1	1	1
Onslow	2	2	2	2	2	2	3	3
Orange	5	5	5	5	5	5	5	5
Pamlico	2	3	3	3	2	2	2	3
Pasquotank	4	3	3	3	2	2	2	3
Pender	4	4	4	4	4	4	3	4
Perquimans	2	2	2	2	1	1	1	1
Person	3	3	3	3	4	3	3	3
Pitt	4	4	4	4	4	4	4	4
Polk	5	5	5	5	3	3	3	3
Randolph	5	5	5	5	5	5	5	4
Richmond	1	1	1	1	1	1	2	1
Robeson	2	2	2	2	2	2	2	2
Rockingham	3	3	3	3	3	3	2	2
Rowan	4	4	4	4	4	4	4	4
Rutherford	3	3	3	2	2	3	2	2
Sampson	4	4	4	4	3	4	4	3
Scotland	2	2	2	2	1	1	1	1
Stanly	3	3	3	3	3	3	3	3
Stokes	5	5	5	5	5	4	4	4
Surry	4	4	4	4	4	4	4	4
Swain	1	1	1	1	1	1	1	1
Transylvania	4	4	4	4	5	5	3	3
Tyrell	1	1	1	1	1	1	1	1
Union	5	5	5	5	5	5	5	5
Vance	2	2	2	2	2	2	1	1
Wake	5	5	5	5	5	5	5	5
Warren	1	1	1	1	1	1	1	1
Washington	2	2	1	1	1	1	1	1
Watauga	4	4	4	4	3	3	3	4
Wayne	3	3	3	3	3	3	3	3
Wilkes	4	3	3	3	4	4	4	3
Wilson	3	3	3	3	3	3	3	3
Yadkin	5	4	4	4	5	4	4	4
Yancey	2	2	2	2	1	1	1	2

The General Assembly periodically has altered the procedure for placing counties in tiers. In 1999, the legislature added the following to ensure that hard-pressed counties would get a favorable tier designation, overriding any quota:

1. Any county with a population less than 10,000 and a federal poverty rate of at least 16 percent would qualify for tier 1;
2. Any county with a population less than 50,000 and a federal poverty rate of at least 18 percent would be placed one tier below the designation it would have otherwise been assigned;
3. Any county with a population less than 25,000 that would otherwise be designated as a tier 4 or 5 county must be placed in tier 3.

Those changes were to take effect in 2000. An additional change in 2000 guaranteed that tier 2 counties, as well as tier 1 counties, would retain their tier designation for at least two years to be able to take better advantage of their status in recruiting and promotion, and securing any targeted state funds.

The inclusion of poverty rates and population in the allocation formula was a major departure from past practice. It resulted in a large resorting of counties among the tiers in that year. 32 percent of counties changed position from 1999 to 2000, 23 percent to a lower tier, and 9 percent to an upper tier. Eight counties from tier 2 and three counties from tier 3 moved to tier 1, resulting in a net gain of eleven counties, to twenty-four. Tier 2 gained five counties from tier 3, decreasing by a net of three counties, to twelve. Tier 3 lost three counties to tier 1, five counties to tier 2, and four counties to tier 4, and gained eight counties (six from tier 4 and 2 from tier 5). Its net change was negative four, to twenty-two counties. Tier 4 lost ten counties (six to tier 4 and four to tier 5) and gained four, for a change of negative six, to nineteen counties. Tier 5 lost two counties to tier 3 and gained four counties from tier 4, for a change of plus two.

The legislature changed two of the small county provisions in 2001, to read as follows:

1. A county with a population less than 12,000 and a federal poverty rate of at least 16 percent will be designated as a tier 1 county. The previous threshold was a population less than 10,000;
2. A county with a population less than 35,000 that would otherwise be designated as a tier 4 or 5 county must be placed in tier 3. The previous threshold was a population less than 25,000.

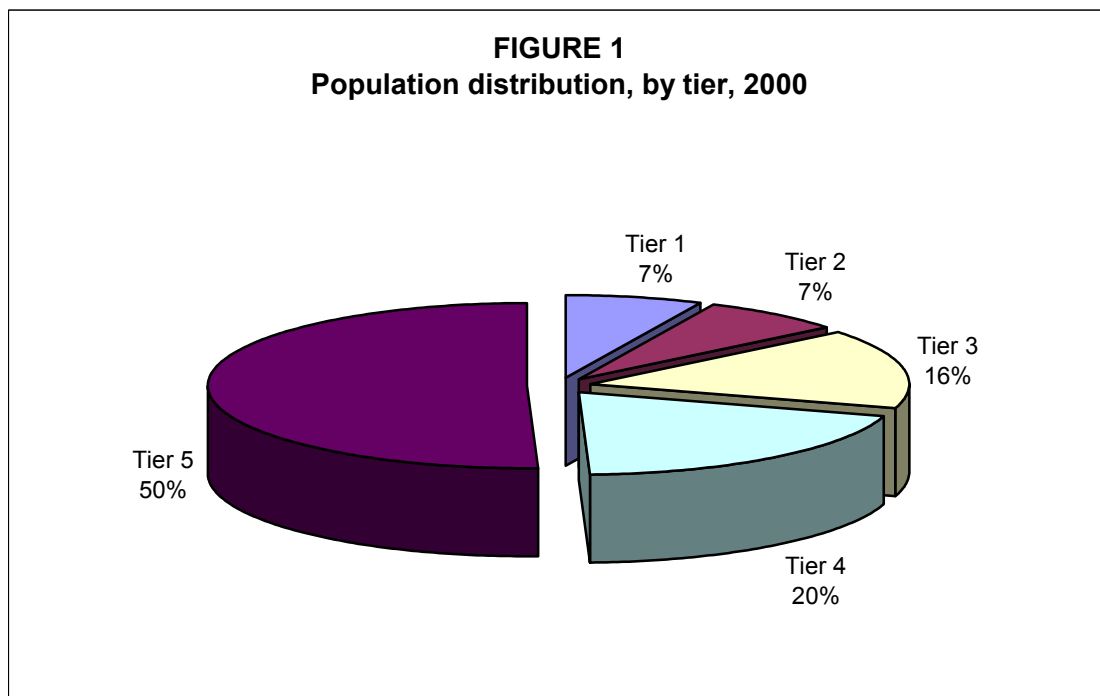
These amendments were intended to focus the incentives even more on small rural (and distressed) counties. They had little effect on overall placements; 11 percent of counties moved tiers, 5 down and 6 up. There were no changes in tier 1 and only one in tier two (a county from tier 3). Tier 3 lost a county to tier 2 and gained three counties, one from tier 2 and two from tier 4. Tier 4 also lost two counties to tier 5, but gained five counties – three from tier 3 and two from tier 5 -- for a net change of one. Tier 5 swapped two counties with tier 4.

Table 2 and figure 1 indicate differences among the tiers in 2000, in terms of such indicators as population, annual average unemployment rate, household income, and the percent of the population in poverty. The tiers get progressively wealthier. In 2000, tier 5 had a higher unemployment rate than tiers 3 and 4 due to large layoffs in traditional industries in those counties.

Table 2: Tier differences, 2000

	No. of counties in tier	Population	Unemp. rate (pct)	Median household income	Pct. of pop in poverty
Tier 1	24	564,461	7.0%	\$28,993	19.2%
Tier 2	12	580,721	5.7%	\$31,105	16.3%
Tier 3	22	1,258,257	4.1%	\$34,126	13.5%
Tier 4	19	1,577,413	4.0%	\$36,932	11.9%
Tier 5	23	4,068,642	4.6%	\$41,990	9.8%
North Carolina	100	8,049,477	3.6%	\$39,184	11.9%

Notes: averages are unweighted arithmetic means. Source: NC LINC



As of 2000, tiers 1 and 2 accounted for 7.0 percent of the population each; tier 3 for 16 percent; tier 4, 20 percent; tier 5, 50 percent (see figure 1). The more distressed (lower) tiers primarily comprise rural counties with smaller populations; the state's urban counties are nearly all in tier 5. In just one year, the percent of population in tier 1 has doubled; as of 1999, tier 1 accounted for 3.9 percent of the population; tier 2 for 8.4 percent; tier 3, 19 percent; tier 4, 21.1 percent; and tier 5, 47.6 percent

SUMMARY OF LEE ACT TAX CREDITS

In this section, we review the provisions of the Act, indicating what has been changed since the last report.⁵

Credit for creating jobs

General requirements

Provides a credit for each new job created by an eligible employer that already has at least 5 full-time employees working 1600 hours or more annually. The credit is available to offset either income tax or franchise tax at the taxpayer's election. The election applies to each 3A credit individually and is irrevocable with respect to the credits generated in a given year.

Additional eligibility requirements

The jobs for which the credit is claimed must be created in an eligible business (see general requirements for list of eligible businesses).

Effective date

Effective for taxable years beginning January 1, 1996, for jobs created on or after August 1, 1996.

Amount

Tier 1	\$12,500 per job
Tier 2	\$4,000 per job
Tier 3	\$3,000 per job
Tier 4	\$1,000 per job
Tier 5	\$500 per job

Availability

The credit is available in equal installments over the four years following the one in which the position is filled.

⁵ The legislature also changed the treatment of activity in development zones, as follows. "A parcel of property located partially within a development zone is considered entirely within the development zone if all of the following conditions are satisfied:

- (1) At least 50% of the parcel is located within the development zone;
- (2) The parcel was in existence and under common ownership prior to the most recent federal decennial census; and
- (3) The parcel is a portion of land made up of one or more tracts or tax parcels of land that is surrounded by a continuous perimeter boundary."

Limitation

All 3A credits are limited to 50 percent of the amount of the tax due under the schedule for which the credits are taken (income or franchise). The combination of all 3A credits, combined with all other 50 percent limited credits, may not exceed 50 percent of the total tax, less non-50 percent-limited credits.

Carryovers

Any available credit that is not utilized because of the above 50 percent limitation may be carried forward for the succeeding five years. The taxpayer determines which and how much of the individual 3A credits are utilized up to the combined 50 percent limits and which 3A credits are carried forward.

Credit for investing in machinery and equipment

General requirements

Provides a credit of 7 percent of the excess value (above the applicable threshold as detailed below) of the cost of qualifying machinery and equipment placed in service in North Carolina by new and expanding businesses, including capital leases of machinery and equipment. The credit is available to offset either income tax or franchise tax at the taxpayer's election. The election applies to each 3A credit individually and is irrevocable with respect to the credits generated in a given year.

Until 2003, the applicable tax credit rate for investments in machinery and equipment was 7 percent in all tiers. It was kept at 7 percent for qualified businesses located in tiers 1 and 2, but was reduced to 6 percent, 5 percent, and 4 percent, respectively, in tiers 3, 4, and 5.

Additional eligibility requirements

The machinery and equipment for which a credit is claimed must be used in an eligible business (see general requirements for list of eligible businesses).

Thresholds (as amended, effective January 1, 2003)

Tier 1	\$ -0-
Tier 2	\$100,000
Tier 3	\$200,000
Tier 4	\$1,000,000 (was \$500,000 prior to 2001)
Tier 5	\$2,000,000 (was \$1,000,000 prior to 2001)

Availability

The credit is available in equal installments over the seven years following the year in which the machinery or equipment was placed in service.

Limitation

All 3A credits are limited to 50 percent of the amount of the tax due under the schedule for which the credits are taken (income or franchise). The combination of all 3A credits, combined with all other 50 percent limited credits, may not exceed 50 percent of the total tax, less non-50 percent-limited credits.

Carryovers

Any available credit that is not utilized because of the above 50 percent limitation may be carried forward for the succeeding five years. The taxpayer determines which and how much of the individual 3A credits are utilized, up to the combined 50 percent limits, and which 3A credits are carried forward.

Credit for research and development

General requirements

Provides a credit equal to 5 percent of the state's apportioned share of the firm's expenditures for R&D. The credit is available to offset either income tax or franchise tax at the taxpayer's election. The election applies to each 3A credit individually and is irrevocable with respect to the credits generated in a given year. An alternative method available to businesses is to allow 25 percent of the R&D credit claimed on the federal business tax return.

Additional eligibility requirements

Taxpayer must have claimed a federal R&D income tax credit under section 41 of the Internal Revenue Code to be eligible. The research and development for which a credit is claimed must be carried out by an eligible business (see general requirements for list of eligible businesses).

State's apportioned share

This amount equals the qualified research expenditures ("QREs") from the taxpayer's federal return less the base amount from the taxpayer's federal return times the ratio of the taxpayer's QREs in North Carolina to the taxpayer's total QREs.

Availability

The credit is available in full in the year generated.

Limitation

All 3A credits are limited to 50 percent of the amount of the tax due under the schedule for which the credits are taken (income or franchise). The combination of all 3A credits, combined with all other 50 percent limited credits, may not exceed 50 percent of the total tax, less non-50 percent-limited credits.

Carryovers

Any available credit that is not utilized because of the above 50 percent limitation may be carried forward for the succeeding fifteen years. The taxpayer determines which and how much of the individual 3A credits are utilized, up to the combined 50 percent limits, and which 3A credits are carried forward.

Credit for worker training

General requirements

Provides a credit of the wages paid to eligible employees during the training up to \$500 (\$1,000 for taxpayers located in tier 1) for each (non-exempt) employee trained by an employer who provides training for five or more employees during the year. The credit is available to offset either income tax or franchise tax at the taxpayer's election. The election applies to each 3A credit individually and is irrevocable with respect to the credits generated in a given year.

Additional eligibility requirements

Employees receiving the training must either (i) fill full-time jobs for which the taxpayer is eligible to claim a job creation tax credit, or (ii) fill full-time positions at the location of the machinery and equipment that qualified for the credit for investing in machinery and equipment, and be receiving training to operate the machinery and equipment for which the credit is claimed. If the employer forfeits either the credit for creating jobs or the credit for investing in machinery and equipment, then this credit must also be forfeited. The training for which the credit is claimed must be carried out as part of an eligible business (see general requirements for list of eligible businesses).

Eligible expenditures

Effective for years beginning on or after January 1, 1999, eligible expenses include wages paid to eligible employees during the training, but do not include wages paid to an employee performing his/her job while being trained.

Availability

The credit is available in the year in which the wages were paid.

Limitation

All 3A credits are limited to 50 percent of the amount of the tax due under the schedule for which the credits are taken (income or franchise). The combination of all 3A credits, combined with all other 50 percent limited credits, may not exceed 50 percent of the total tax, less non-50 percent-limited credits.

Carryovers

Any available credit that is not utilized because of the above 50 percent limitation may be carried forward for the succeeding five years. The taxpayer determines which and how much of the individual 3A credits are utilized, up to the combined 50 percent limits, and which 3A credits are carried forward.

Credit for investment in central administrative office or aircraft facility properties

General requirements⁶

Provides a credit of 7 percent of the eligible investment in real property (including leased real property) for use as a central administrative office or aircraft facility, up to a maximum of \$500,000. The credit is available to offset either income tax or franchise tax at the taxpayer's election. The election applies to each 3A credit individually and is irrevocable with respect to the credits generated in a given year.

Eligible investment in real property

The eligible investment amount is the lesser of either (a) the cost of the property or (b) the amount by which the costs of all the property the taxpayer is using in North Carolina as central administrative offices on the last day of the taxable year exceeds the cost of all the property the taxpayer was using in North Carolina as central administrative offices or aircraft facilities on the last day of the base year. The base year is defined as that year, of the three immediately preceding years, in which the taxpayer was using the most property in North Carolina.

Additional requirements

The taxpayer must hire at least 40 additional full-time administrative employees at the central administrative office within a specified time period to be eligible.

Availability

The credit is available in equal installments over the seven years following the year in which the property was first used a central administrative office or aircraft facility. The credit expires or is reduced if any of the following circumstances occur in one of the seven years in which the installment of a credit accrues: (1) the credit expires (is reduced) if all (or part) of the property is no longer used as a central administrative office or aircraft facility; or (2) the credit expires if the total number of employees employed at all of the taxpayer administrative offices or aircraft facilities in North Carolina drops by 40 or more.

Limitation

All 3A credits are limited to 50 percent of the amount of the tax due under the schedule for which the credits are taken (income or franchise). The combination of all 3A credits, combined with all other 50 percent limited credits, may not exceed 50 percent of the total tax, less non-50 percent-limited credits.

⁶ This credit was not included in the initial William S. Lee tax act legislation, but was added in the following year.

Carryovers

Any available credit that is not utilized because of the above 50 percent limitation may be carried forward for the succeeding five years. The taxpayer determines which and how much of the individual 3A credits are utilized, up to the combined 50 percent limits, and which 3A credits are carried forward.

Technology commercialization credit⁷

The legislature also created the technology commercialization tax credit (G.S. 105-129.9) for investments that meet the following criteria, effective in 2001:

1. The eligible machinery and equipment must be directly related to production based on technology developed by and licensed from a research university; or be used to produce resources essential to the taxpayer's production based on technology developed by and licensed from a research university.
2. The eligible machinery and equipment must be placed in service in a tier one, two, or three enterprise area.
3. The eligible investment amount must be at least \$10,000,000 for the taxable year.
4. If qualifying for a 20% credit, the taxpayer must invest at least \$150 million in eligible machinery and equipment by the end of the fourth year after the year in which eligible machinery and equipment are first placed in service in the area.
5. If qualifying for a 15% credit, the taxpayer must invest at least \$100 million in eligible machinery and equipment by the end of the fourth year after the year in which eligible machinery and equipment are first placed in service in the area.
6. No more than nine years has passed since the first taxable year the taxpayer claimed a technology commercialization credit with respect to the same location.

Taxpayers cannot take this and the machinery and equipment credit for the same investment.

The credit is a percentage of the excess of the eligible investment amount over the applicable threshold for the tax year. For a taxpayer whose level of investment is at least \$100 million, the percentage is 15 percent. If the level of investment is at least \$150 million, the percentage is 20 percent. In calculating the eligible investment amount, machinery and equipment that were transferred to another taxpayer or were taken out of service during the three years preceding the tax year may be considered the taxpayer's machinery and equipment if certain conditions are met.

Lee Act credits as enhancements for businesses in development zones⁸

Companies eligible for tax credits under the William S. Lee Act gain additional enhancements when located in a designated development zone. Those enhancements were effective January 1, 1999 for tax years beginning on or after January 1, 1999.

⁷ This material is from <http://www.ncse.org/tech.php>.

⁸ From <http://www.nccommerce.com/finance/forms/dzattach.pdf>

- For purposes of the wage standard test, the company must meet only 100 percent of the county's average weekly wage figure.
- Machinery and equipment investment threshold is reduced to zero.
- There is an additional \$4,000 tax credit per eligible job created.
- Up to \$1,000 tax credit may be claimed for each eligible worker trained.

A "development zone" is an area comprised of one or more contiguous census tracts, census block groups, or both in the most recent federal decennial census meeting all of the following conditions:

- **Income Standard:** More than 20 percent of its population is below the federal poverty level.
- **Boundaries:** Contiguous census tracts and/or block groups that meet the income standard (the area may include tracts or portions of tracts with less than 20 percent poverty, provided poverty level of the entire zone exceeds 20 percent poverty). All census tracts and/or block groups must be partially within the contiguous municipal boundaries.
- **Minimum Size:** 1,000 population. Each census tract and/or block group with less than 10 percent of population below poverty must be adjacent to a census tract and/or block group with greater than 20 percent of the population being below poverty.
- **Municipal Status:** zone must be in a municipality with population of at least 5,000.

Taxpayers or local governments may submit an application to the Commerce Division of Community Assistance to request the designation of a development zone. The designation is valid for two years from the designation date.⁹

Wage standard

Prior to January 1, 2003, taxpayers seeking Lee Act credits for job creation, investment in machinery and equipment, investment in real property for a central office or aircraft facility, investment in research and development, and expenditures for worker training, were required to pay at least the average wage of all non-credit jobs at the location for which credits were claimed. A 2002 change (effective January 1, 2003) eliminated that wage standard altogether for taxpayers to qualify for the worker training credit, and in tiers 1 and 2 for taxpayers to qualify for credits for job creation, investment in machinery and equipment, investment in real property for a central office or aircraft facility, and investment in research and development. The wage standard was retained for tiers 3, 4, and 5 for all credits except worker training.

THE COST OF THE WILLIAM S. LEE ACT FOR NORTH CAROLINA

In this section, we address the following questions:

- What has been the total cost-to-date of the Act in terms of foregone tax revenues, and what is the cost likely to be in the future?
- How have the provisions of the Act been utilized?

⁹ Only after January 1, 2000. Designation of zones established in 1998 and 1999 expired on January 1, 2001. Municipalities with zones designated prior to January 1, 2000 had to reapply during September 2000 to continue designation. Beginning January 1, 2000, zones will be designated for 24 months

- How have the tax credits been distributed among businesses:¹⁰
 - located in different tiers and
 - in different general industry groups

It is important to note that the numbers we provide below are different from what was reported by DOR to the legislature in a March memorandum, for reasons we explain below. In short, we use tax year rather than processing year, we have more complete tier data than was available in March, and we separate the use of incentives by corporations and individual taxpayers. With the help of DOR we have conducted a much more thorough analysis.

The Cost of the Act

Table 3 summarizes the gross cost of the Lee Act over its lifetime, in terms of its tax expenditure (credits utilized) and future liability for businesses. The table also shows the distribution of the tax expenditure among the types of credits. There are additional costs to the state from tax expenditures made to individual taxpayers to whom the credits are passed via the estate, individual, partnership, and trust taxation. We show those tax expenditures in table 4.

As the note to table 3 explains, the entries in the second column do not quite indicate the number of taxpayers receiving the credit. A single business would show up twice if it uses the tax credits to offset both its income and franchise taxes. In addition, a business that applies for more than one type of tax credit is entered separately for each credit. And, the taxpayers noted in the table are those who generated new activity under the Lee Act in the given year, regardless of whether they were receiving installments or carryovers from previous years. In addition, there is some vagueness about the number of claimants because there is no single accepted measure of “participation.” Businesses begin their involvement with the tax credit process by paying an application fee to DOC, requesting certification for activity they expect to complete. Then they file tax returns with DOR, along with documentation of their qualified activity. The number of participants drops off between certification and tax filing. In 1999, DOR added a form (NC-478), intended to collect pertinent information better. It is important to note that taxpayers do not provide documentation for the activity that triggers tax credits until they file their returns – and that occurs the year after the activity occurred. For the credits that are paid in installments, taxpayers have to provide annual documentation. For these reasons, the DOR database is dynamic; at any point in time there may be discrepancies between what taxpayers say they were going to do, what they initially did, and how they have followed up with on-going activity. There are also some businesses that show up in DOR data not for new Lee Act activity, but because they are filing to receive later installments on previous activity, or to use a carryover created with activity in an earlier year.

With those caveats in mind, we can make some judgment about the order of magnitude of participation in the Act. Despite the fact that there are many thousands of potentially eligible businesses in the state, table 3 indicates that the Act has been used by a relatively small number of taxpayers. The machinery and equipment credit has had the most interest in terms of number of

¹⁰ In earlier reports we also considered the effect of the act on firms from out-of-state versus existing North Carolina businesses, and on firms of different ages. We discovered that the Department of Revenue used outdated data in dividing credit recipients into in-state versus out-of-state, so that breakdown is omitted from this version of the report. We have requested data from the North Carolina Employment Security Commission to match our taxpayer files with theirs, to be able to assess the impact of age of business on use of tax incentives. (The data could be obtained directly from tax returns, but would require considerable manual intervention.)

claims and dollars expended. But even in the most active year (2000) there were just over 700 claims. Less than a thousand claims in total were made in the 1997, 1998, and 1999 tax years. There was a jump in 2000 to 1698, but the economic slowdown in 2001 again reduced the number (to 1144).¹¹ The concentration of use is even more pronounced when the value of credits taken is considered. According to the DOR: “in recent years, five or six corporations have utilized nearly one-third of the credits claimed under the program. An additional 15-20 corporations account for almost another third of the total credits claimed.”¹² In short: a few dozen firms, at most, account for two-thirds of the Lee Act tax expenditure, or approximately \$35 million per year.

The economic slowdown that affected the number of claimants also shows up in the pattern of credits generated and utilized. We can see in the third column of the table an increase in credits generated through 1999, and then a falling-off. The 2001 generated figure is artificially low; late filers for 2001 will show up in the batch of returns that are part of the 2002-processing year, just as the 2001 and 2000 processing years included 2000 and 1999-year returns, respectively. The fourth column shows a slow-down in credits claimed or utilized. That is not surprising since businesses need to have taxable income to offset, and are subject to the 50 percent rule. So, as the bottom line weakens for businesses, the less useful the credits become.

As argued in the 2001 Report, the state has to consider not only the year-to-year tax expenditure (credits utilized), but also the future tax expenditure liability (the fifth column of table 3). Credits that cannot be utilized because of the lack of taxable income and the 50 percent rule can be carried forward, currently for five years in most cases for the jobs, M&E, worker training, and CAO credits, and fifteen years for the R&D credit.¹³ And, the credits utilized in any one tax year do not reflect future installments. So, if the Act were to be terminated today, the state would still have *up to* \$947.4 million in future tax expenditure liability.

The words “up to” are important. That \$947.4 million is an upper bound to the future liability because businesses that now qualify for installments and carryovers may not end up receiving them, for four principal reasons:

- (1) their behavior may not be as required under the terms of the Act, making them ineligible for some of the remaining credits,
- (2) the firm may cease to exist (close or move or be merged and not seek tax credits in North Carolina),
- (3) the firms may never be able to offset some of its taxes either because it runs out of time to use carryovers, or never generates net revenue, and
- (4) firms may decide it is too bothersome to fill out the forms required in order to get a relatively small amount of remaining credits.

¹¹ We use tax years, not processing years, in our analysis. Because businesses can file for tax credits retroactively, and tax returns are sometimes processed with a lag, we expect to see an increase in Lee Act activity for 2000 and 2001 when the tax returns processed in 2002 and 2003 are reviewed. We still expect to see a slowdown in Lee Act activity due to the recession.

¹² Memo to Edward J. Feser, Executive Director of NCDOC’s Division of Economic Policy, Research and Strategic Planning, from Karl Knapp, Director of DOR’s Tax Research Division, dated June 20, 2003.

¹³ Carryforward provisions have been changed over the life of the Act. The carryforward that pertains to the credit in the year the credit is generated stays with the taxpayer for that year’s credit, regardless of later changes in the provision. As an example, in 1999 the carryforward for the R&D credit was also five years, so taxpayers qualifying for that credit then still must use that carryforward.

We do not have enough experience with the William S. Lee Act to be able to detect patterns in businesses' long-term utilization of tax credits. Therefore, we cannot predict with certainty the share of the outstanding liability that will be used by businesses. More detailed research and modeling are needed on that particular issue. One approach would be to track over time the installments generated in the year activity occurred. To do that systematically, we need to improve the database. When that analysis is done, we expect to see a much smaller projection for the unclaimed future liability.

Notes for table 3 (on following page)

* There was \$14,209,427 in utilized credits in 1997 that could not be allocated by type of credit due to 180 missing data records. Percentages in far right column for 1997 are based on credits that could be allocated (\$11,193,635). Credits generated in 1996 are not included in the table.

** These numbers do not sum to the number of businesses claiming any credit, as reported by the Department of Revenue, because some businesses claim more than one type. Claims here are independent records; for example, a company that takes credits against both income and franchise taxes is treated as two claims. These are businesses generating new credits in the indicated tax year only; more businesses get credits in any year due to installments and carryovers. Data for 1997 and 1998 may be less than the real values because of the way data were reported to us.

*** This was calculated this year as the difference between aggregate credits generated and credits taken. A more accurate method of estimating unclaimed liabilities would use a "vintage accounting" framework. Starting in year 1, there are G credits generated, of which G/n can be taken as an installment, up to 50 percent of tax liability. In the next year, the next installment of last year's G can be taken, plus carryover of unused amount that was subject to the 50 percent rule, plus the installment from new credits generated. That whole amount is subject to the 50 percent rule with carryovers generated again. That method was used in the 2001 report, but the data necessary to implement it this year are not available. We do not believe there is much bias in the simpler method.

Sources: Credits generated data for worker training and R&D in 1997, from M. Luger, *Economic Effects of the William S. Lee Tax Act: First Cut Analysis, 1999* (Chapel Hill, NC: Office of Economic Development). Credits generated data for worker training, R&D, and CAO for 1998 from NCDOR, *William S. Lee Quality Jobs and Business Expansion Act: Assessment of Results*, June 2001 (Raleigh, NC), Table B-2. All other credits generated data compiled by James Haag, NCDOR, Division of Policy, Research and Strategic Planning, June 17, 2003, via transcription of business tax returns. Credits claimed data compiled by author using data provided by DOR.

TABLE 3
William S. Lee Act Cost (Tax Expenditure), 1996-2001*

	Number of returns with new credits generated**	Value of credits generated	Credits utilized	Max. credits available to be claimed in future tax years***	Credits generated as percent of all credits	Credits utilized as a percent of all credits*
Machinery and equipment (M&E)						
1996		\$84,186,322				
1997	94	\$198,085,000	\$4,142,674		84.4%	37.0%
1998	163	\$183,446,028	\$11,091,833		76.5%	51.7%
1999	360	\$194,093,583	\$40,695,976		71.8%	60.9%
2000	706	\$121,444,892	\$31,196,977		65.1%	61.7%
2001	529	\$78,033,859	\$28,828,896		63.9%	65.4%
Total M&E credit		\$859,289,684	\$115,956,356	\$743,333,328	74.3%	55.6%
Jobs						
1996		\$17,616,545				
1997	112	\$26,140,199	\$821,684		11.1%	7.3%
1998	185	\$35,873,672	\$2,635,298		15.0%	12.3%
1999	317	\$43,812,130	\$11,092,044		16.2%	16.6%
2000	536	\$25,646,953	\$11,185,008		13.7%	22.1%
2001	400	\$13,169,730	\$7,839,928		10.8%	17.8%
Total jobs credit		\$162,259,229	\$33,573,962	\$128,685,267	14.0%	16.1%
Worker training						
1996						
1997	3	\$764,593	\$340,304		0.3%	3.0%
1998	9	\$546,794	\$268,306		0.2%	1.2%
1999	55	\$3,877,010	\$2,979,658		1.4%	4.5%
2000	111	\$4,668,223	\$1,804,887		2.5%	3.6%
2001	31	\$2,892,582	\$1,711,880		2.4%	3.9%
Total worker training credits		\$12,749,202	\$7,105,035	\$5,644,167	1.1%	3.4%
Research and development (R&D)						
1996						
1997	108	\$9,761,260	\$5,888,973		4.2%	52.6%
1998	111	\$17,754,244	\$7,452,720		7.4%	34.7%
1999	158	\$21,701,902	\$10,427,813		8.0%	15.6%
2000	216	\$32,062,869	\$5,511,222		17.2%	10.9%
2001	141	\$26,409,775	\$4,919,961		21.6%	11.2%
Total R&D credit		\$107,690,050	\$34,200,689	\$73,489,361	9.3%	16.4%
Central administrative offices (CAO)						
1996						
1997			\$0		0.0%	0.0%
1998	7	\$2,315,169	\$17,605		1.0%	0.1%
1999	35	\$6,959,343	\$1,658,032		2.6%	2.5%
2000	129	\$2,864,926	\$851,924		1.5%	1.7%
2001	43	\$1,684,951	\$794,819		1.4%	1.8%
Total adm offices credit		\$13,824,389	\$3,322,380	\$10,502,009	1.2%	1.6%
All credits						
1996		\$101,802,867				
1997	317	\$234,751,052	\$25,403,062		20.3%	12.2%
1998	475	\$239,935,907	\$21,465,762		20.8%	10.3%
1999	925	\$270,443,968	\$66,853,523		23.4%	32.1%
2000	1698	\$186,687,863	\$50,550,018		16.2%	24.3%
2001	1144	\$122,190,897	\$44,095,484		10.6%	21.2%
Total all credits, all years		\$1,155,812,554	\$208,367,849	\$947,444,705	100.0%	100.0%

Table 3 also shows the distribution of tax expenditures among the five categories of Lee Act credits. That is summarized graphically for 1996-2001 for credits generated and 1997-2001 for credits utilized. The machinery and equipment tax credit is the largest in terms of generated tax expenditures in each of the years, and in four of five years for credit utilization. Worker training and central administrative office credits are small in relative terms, in terms of generation and use.

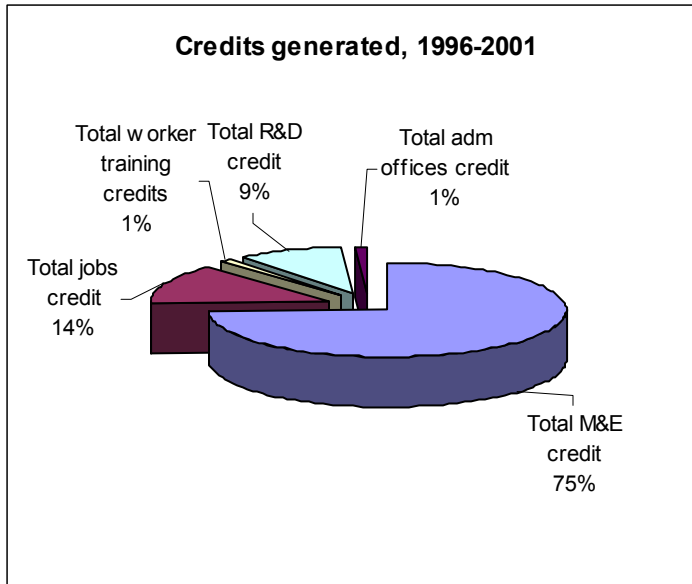


Figure 2A

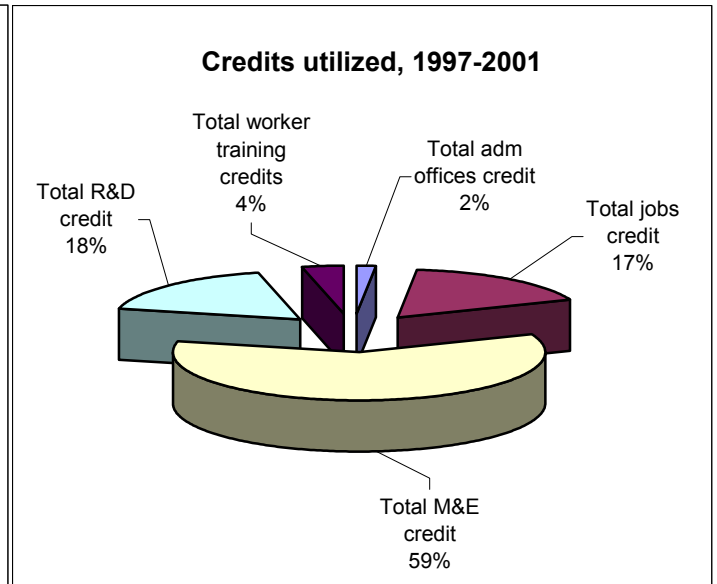


Figure 2B

Table 4 indicates an additional \$8,332,515 of taxes were foregone by individual taxpayers who claimed Lee Act credits. Most of that was from credits taken on individual tax returns, passed through from businesses in which the taxpayer had an ownership share.

Table 4: Total non-corporate credits taken, 1999-2001*

1999 TOTAL Credits Taken			
	<u>Total credits</u>	<u># of claims**</u>	<u>Avg per claim</u>
Estate	\$4,719	16	\$295
Individual	246,679	124	\$1,989
Partnership	265,888	8	33,236
Trust	-	-	-
Total	\$517,286	148	\$3,495

2000 TOTAL Credits Taken			
	<u>Total credits</u>	<u># of claims**</u>	<u>Avg per claim</u>
Estate	\$1,764	9	\$196
Individual	4,037,022	647	\$6,240
Partnership	215,032	13	16,541
Trust	-	-	-
Total	\$4,253,818	669	\$6,358

2001 TOTAL Credits Taken			
	<u>Total credits</u>	<u># of claims**</u>	<u>Avg per claim</u>
Estate	\$758	10	\$76
Individual	3,157,590	550	\$5,741
Partnership	403,063	28	14,395
Trust	-	-	-
Total	\$3,561,411	588	\$6,057

GRAND TOTALS			
	<u>Total credits</u>	<u># of claims**</u>	<u>Avg per claim</u>
Estate	\$7,241	35	\$207
Individual	7,441,291	1,321	5,633
Partnership	883,983	49	18,040
Trust	-	-	-
Total	\$8,332,515	1,405	\$5,931

* Processed in 2002. The 1999 data represent only part of the 1999 returns with Lee Act credits. Similarly, the 2003 processing year will include some 2001 and 2002 returns.

** Claims are independent records - for example a company that takes a credit against both income and franchise taxes is treated as two claims.

Utilization of Lee Act credits

Table 5 shows part of the benefits side of the Lee Act credits: the *gross* economic activity *directly* associated with the Act's provision. The two italicized words are important in the previous sentence. "Gross" refers to the reported activity that triggered the tax credit. Undoubtedly, some of that activity would have occurred anyway. Even in that case, however, the Act has an economic effect, by making the recipient businesses more profitable after taxes. That may enable them to attract more capital, compete better in global markets, and ultimately, hire more North Carolina workers than they otherwise would have. Of course, that effect depends on the use of after-tax profits – specifically, whether they remain in the state or are expatriated to a headquarters or branch plant location elsewhere. That also is an empirical question that is beyond the scope of this study. "Directly" refers to the correspondence between the Act and any changes in output, investment, and employment by the participating businesses. If there were such a change in behavior, there also would be indirect effects, due to what economists call the "multiplier." As company A increases output (and increases its own input use accordingly), it would demand more inputs from its suppliers, who, in turn, would increase their output, investment, and employment.¹⁴

Gross effects

Table 5 indicates that the tax expenditure (credits claimed) in 2001 (for example) of \$28,828,896, on machinery and equipment credits is associated with approximately \$1.1 billion in qualified investments.¹⁵ We constructed the \$1.1 billion figure by dividing the amount of credits generated in the tax year by 7 percent (the value of the credit per dollar of qualified investment). Hence, the dollars invested per dollar of credit generated is \$14.29 (1/0.07).

The value of gross new activity associated with the Act per dollar of tax expenditure can be used as a measure of gross effectiveness. Unfortunately, the data we were provided are not ideal for that purpose. The credits claimed are not for a single year's new activity, but for all previous activity (and includes carryovers and installments). But, the credits generated values – which are used to generate associated activity -- are for the tax year indicated. To deal with that problem, we estimate a single number for gross effectiveness, aggregating all years' credits claimed and dividing by all associated activity. When we do that, we have the following indicators:¹⁶

¹⁴ In the 2001 Report, we included the indirect effects, as well. We were not asked to that this year.

¹⁵ This is also a rough estimate. The credits generated are above the threshold amounts. To qualify for an M&E tax credit in tiers 2-5, businesses must make in excess of \$100,000, \$200,000, \$1,000,000, and \$2,000,000 in investments, respectively. One could argue that the below-threshold amounts also should count as generated activity and be included in column six. We do not to err on the side of conservatism.

¹⁶ The \$206 figure is too low because it does not account for development zone credits. The \$327 figure is too high because it omits jobs reported in 1996-98. The actual value is most likely closer to the upper limit than to the lower. See footnote **** to table 5.

- dollars of associated M&E investment per dollar of credits claimed: \$105.86
- tax expenditures per dollar of associated employment from jobs credit: \$206-\$327
- tax expenditures per dollar of associated trained worker: \$287.26
- dollars of associated R&D spending per dollar of credits claimed: \$62.98
- dollars of associated CAO investment per dollar of credits claimed: \$59.44

We have not created these metrics as a means to compare across the different credits. A dollar of M&E investment (associated with 1/\$105.86 in tax expenditures, or roughly 1 cent) does not necessarily have the same welfare consequence as a dollar of R&D spending (associated with 1/\$62.92 in tax expenditures, or approximately 1.6 cents), or a dollar of CAO investment (associated with 1/\$59.44, or 1.7 cents). And, instead of presenting dollars of activity per dollar of tax expenditure for the jobs and worker training credits (as we do for the M&E, R&D, and CAO credits), we show tax expenditure per associated job or worker trained. We do that to be consistent with a convention among economic development researchers, who report the public cost of job creation via different subsidy programs.¹⁷

By the indicators in table 5 the Lee Act appears to be effective. However, to gauge economic efficiency we need to answer the counterfactual question: how much of the new activity is induced, i.e., would not have occurred anyway? In a scholarly paper based on 2001 Lee Act Report, Luger and Bae (2003) estimate that only around 4 percent of the jobs claimed to be created with Lee Act incentives actually were induced. That means the cost of induced job per credit dollar is much higher than what is shown above and in table 5 – in the \$5150 to \$8175 range (near the top of the range indicated by Wiewel, Persky, and Sendzik (fn 17)). Whether that is too high is a value question which has been debated with regard to many different approaches to job creation. In any case, one could argue that the Lee Act is not intended just to induce hiring by the firms using the incentives. One interpretation of its broader purpose is to make North Carolina businesses more competitive. Having more money after taxes may induce recipient businesses to expand within North Carolina, perhaps at another location, or could increase dividend payouts to shareholders. Or the recipient businesses could use the additional liquidity to modernize – enabling them to produce more goods and services with fewer workers. Those businesses will increase in capital value, benefiting their shareholders.

Finally, a relevant issue is how many tax credit dollars have gone to individual claimants. Given the cost of the application and the time and effort required to qualify and follow-up, businesses would need to get a large payoff to make the pursuit of tax credits worthwhile. The data we had accessible were not ideal to answer the question. DOR reported to us the number of

¹⁷ For example, Wiewel, Persky, and Sendzik (1999) review the literature and say: “The following cost-per-job estimates are taken from studies conducted during the past 20 years on a variety of rural employment development programs. These studies provide valuable information about the costs of creating jobs in rural areas. The cost-per-job estimates for these programs vary widely, ranging from \$437 to \$28,350. For most of these programs, the average cost-per-job is between \$1,000 and \$5,000” (p. 5). The programs to which they refer include rural enterprise zones, business incubators and U.S. Economic Development Administration public works projects.

new claimants in each year. Assuming that each new claimant stays in the system to collect future carryovers and installments, we could simply aggregate the numbers in the following way:

- in 1997, 94 new claimants received \$4,142,674 in credits
- in 1998, those 94, plus 163 new claimants received \$11,091,833
- in 1999 those 257, plus 360 new claimants received \$40,695,976
- in 2000, those 617, plus 706 new claimants received \$31,196,977, and
- in 2001, those 1323, plus 529 new claimants, received \$28,828,896

That would generate average tax expenditures of approximately \$44,000, \$43,000, \$66,000, \$23,500, and \$15,500 in each succeeding year, 1997-2001.

Those estimates suffer two problems, however. First, as previously discussed, there is a fall-off each year in the number of taxpayers still receiving credits from previous years' activity – because they do not invest or employ the resources they did initially, go out of business, or move, for example. We do not know what that is rate of erosion is. So, of the 94 new claimants in 1997, some smaller number would carryover to 1998, and so on. Second, as noted above, the distribution of Lee Act credits among taxpayers is skewed toward a few large companies, so “averages” are misleading. A relatively small number of companies receive much larger amounts of tax credits, and hundreds of companies receive smaller amounts than are indicated above. We did not have the data to calculate the median and standard deviation, which would be more useful indications.

DOR also provided data on the number of tax returns in a given year which specify some credit to be allowed in that year, whether or not the credit was newly generated. The figures in the fifth column of the table (for 1999-2001) include taxpayers receiving previous years' installments and carryovers, as well as first-time claimants. These numbers also are flawed because they are based only on returns processed in 2001 and 2002. Therefore, the 1999 number does not reflect 1999 returns processed in 2000, and the 2000 and 2001 numbers do not reflect returns to be processed in 2003 and later. Nonetheless, we calculate dollars claimed per claimant using these data, as well, reported in the second-to-last column. Whether the numbers in that column are an under- or over-estimate depends on whether the uncounted returns have a higher or lower average amount of credits claimed per claimant than the counted returns.

TABLE 5: Effectiveness of the William S. Lee Tax Act

Year	Value of credits generated	Value of credits claimed	# of returns with new credits generated	total number of returns claiming credit	Amount of activity reported in/ based on data in column 2*	Dollars of credits claimed per new claimant	Dollars of credits claimed per claimant****	Effectiveness measures
Machinery and equipment (M&E)								\$ invested per \$ credit claimed
1996	\$84,186,322				\$1,202,661,743			
1997	\$198,085,000	\$4,142,674	94		\$2,829,785,714	\$44,071		
1998	\$183,446,028	\$11,091,833	163		\$2,620,657,543	\$43,159		
1999	\$194,093,583	\$40,695,976	360	254	\$2,772,765,471	\$65,958	\$160,220	
2000	\$121,444,892	\$31,196,977	706	941	\$1,734,927,029	\$23,580	\$33,153	
2001	\$78,033,859	\$28,828,896	529	793	\$1,114,769,414	\$15,566	\$36,354	
All years	\$859,289,684	\$115,956,356			\$12,275,566,914			\$96.25
Jobs (J)**								cost in claimed tax credits per job created*****
1996	\$17,616,545				15,688			
1997	\$26,140,199	\$821,684	112		30,519	\$7,336		
1998	\$35,873,672	\$2,635,298	185		27,833	\$8,873		
1999	\$43,812,130	\$11,092,044	317	204	13,302 - 52,539	\$18,065	\$54,373	
2000	\$25,646,953	\$11,185,008	536	686	8,884 - 21,590	\$9,726	\$16,305	
2001	\$13,169,730	\$7,839,928	400	579	6,448 - 14,975	\$5,058	\$13,540	
All years	\$162,259,229	\$33,573,962			104,275			\$227- \$349
Worker training (WT)***								cost in claimed tax credits per worker trained
1996								
1997	\$764,593	\$340,304	3		765	\$113,435		
1998	\$546,794	\$268,306	9		1094	\$22,359		
1999	\$3,877,010	\$2,979,658	55	61	7754	\$44,473	\$48,847	
2000	\$4,668,223	\$1,804,887	111	151	9336	\$10,140	\$11,953	
2001	\$2,892,582	\$1,711,880	31	35	5785	\$8,191	\$48,911	
All years	\$12,749,202	\$7,105,035			24734			\$287.26
Research and development (R&D)								\$ R&D spending per \$ credit claimed
1996								
1997	\$9,761,260	\$5,888,973	108		\$195,225,200	\$54,528		
1998	\$17,754,244	\$7,452,720	111		\$355,084,880	\$34,031		
1999	\$21,701,902	\$10,427,813	158	92	\$434,038,040	\$27,660	\$113,346	
2000	\$32,062,869	\$5,511,222	216	280	\$641,257,380	\$9,294	\$19,683	
2001	\$26,409,775	\$4,919,961	141	203	\$528,195,500	\$6,703	\$24,236	
All years	\$107,690,050	\$34,200,689			\$2,153,801,000			\$62.98
Central administrative offices (CAO)								\$ invested per \$ credit claimed
1996								
1997		\$0						
1998	\$2,315,169	\$17,605	7		\$33,073,843	\$2,515		
1999	\$6,959,343	\$1,658,032	35	59	\$99,419,186	\$39,477	\$28,102	
2000	\$2,864,926	\$851,924	129	157	\$40,927,514	\$4,982	\$5,426	
2001	\$1,684,951	\$794,819	43	57	\$24,070,729	\$3,714	\$13,944	
All years	\$13,824,389	\$3,322,380			\$197,491,271			\$52.20

Notes for Table 5:

* M&E, R&D, and CAO activity estimated as credits utilized divided by applicable tax credit rate. Jobs and worker training activity estimated by applying benefits that apply to activity in different tiers.

** Reported data for the jobs credit, by tier, included \$441,709 (0.3 percent) as "unknown". We allocated those to the tiers in the same proportion as the 99.7 percent of credits whose tier location was known.

*** Reported data for the worker training credit, by tier, included a "multiple" tier amount only for 1997, and a "multiple" category along with tier data in 1998. For the former, we allocated the credits to tiers based on the (1997-2001) distribution. For the latter we used the proportion of credits by tier for that year

**** These estimates are based on returns processed in 2001 and 2002. Therefore, the 1999 number does not reflect 1999 returns processed in 2000, and the 2000 and 2001 numbers do not reflect returns to be processed in 2003 and later.

***** The lower bound of the ranges indicated for 1999 - 2001 was calculated by James Haag, accounting for the additional tax credits provided taxpayers in those years who had activity in development zones. Mr. Haag calculated an average tax credit generated per job for the 1996-1998 period (prior to the development zone legislation), using data in the table and then applied that to the 1999-2001 credit generated dollars to get estimated number of jobs in period.

No matter how it is calculated, the tax expenditure per claimant has fallen from a 1999 year high for almost every credit. That parallels the slowing-down of the annual addition to unclaimed liability since 1998 (in table 3). That is both good and bad news. It certainly is good that the state is losing less revenue because of the Act, at a time when the budget already is tight. But the immediate-term forecast for revenue loss is worrisome: as the state's economy picks up in 2003-04, so will the tax expenditure due to the Act. State budget planners must take that into consideration.

Distribution of tax credits among different tiers and types of businesses

For each of the credits – jobs, machinery and equipment (M&E), research and development (R&D), worker training, and central administrative office – we analyzed data provided by the NC Department of Revenue on aggregates of businesses claiming credits. The recipients were grouped in the following ways:

- by location, tier 1 – 5, and
- by industry group
 - *traditional manufacturing* including agricultural and tobacco, textile and apparel, and furniture
 - chemical and paper manufacturing and printing
 - *medium capital intensive*, including manufacture of rubber, stones, jewelry, and electrical machinery
 - *heavier and high-tech manufacturing*
 - other

Table 6A: Generated tax credits, by tier, year, and type of credit

	1996	1997	1998	1999	2000	2001	All years
Jobs							
<i>Tier 1</i>	\$6,243,707	\$4,924,824	\$8,170,719	\$7,535,290	\$7,561,891	\$2,165,759	\$36,602,189
<i>Tier 2</i>	\$1,744,303	\$1,393,716	\$6,758,281	\$2,071,360	\$2,310,457	\$1,126,067	\$15,404,184
<i>Tier 3</i>	\$2,791,972	\$5,920,299	\$4,117,671	\$4,909,420	\$4,946,320	\$1,101,084	\$23,786,766
<i>Tier 4</i>	\$2,242,137	\$5,579,610	\$9,536,600	\$8,809,441	\$2,897,971	\$3,400,003	\$32,465,762
<i>Tier 5</i>	\$4,594,427	\$8,321,750	\$7,290,401	\$20,486,619	\$7,930,314	\$5,376,818	\$54,000,328
All tiers	\$17,616,545	\$26,140,199	\$35,873,672	\$43,812,130	\$25,646,953	\$13,169,730	\$162,259,229
Machinery and Equipment							
<i>Tier 1</i>	\$2,985,686	\$16,188,654	\$18,249,898	\$14,091,049	\$9,205,422	\$4,503,068	\$65,223,778
<i>Tier 2</i>	\$1,687,810	\$8,436,671	\$3,080,221	\$3,180,629	\$2,571,327	\$6,521,687	\$25,478,346
<i>Tier 3</i>	\$10,084,460	\$16,751,291	\$21,518,029	\$12,777,963	\$10,410,754	\$4,456,484	\$75,998,981
<i>Tier 4</i>	\$14,774,455	\$38,629,686	\$32,926,792	\$31,513,432	\$20,423,069	\$19,614,143	\$157,881,577
<i>Tier 5</i>	\$54,653,910	\$118,078,697	\$107,671,088	\$132,530,510	\$78,834,319	\$42,938,477	\$534,707,002
All tiers	\$84,186,322	\$198,085,000	\$183,446,028	\$194,093,583	\$121,444,892	\$78,033,859	\$859,289,684
Worker Training							
<i>Tier 1</i>		\$50,280	\$268,813	\$266,940	\$260,806	\$124,411	\$971,251
<i>Tier 2</i>		\$14,255	\$0	\$77,555	\$96,221	\$43,843	\$231,874
<i>Tier 3</i>		\$155,838	\$91,975	\$1,475,292	\$591,387	\$272,923	\$2,587,415
<i>Tier 4</i>		\$189,136	\$171,290	\$565,727	\$1,461,459	\$786,698	\$3,174,310
<i>Tier 5</i>		\$355,083	\$14,716	\$1,491,496	\$2,258,350	\$1,664,707	\$5,784,352
All tiers		\$764,593	\$546,794	\$3,877,010	\$4,668,223	\$2,892,582	\$12,749,202
Research and Development							
<i>Tier 1</i>		\$57,223	\$9,309	\$124,221	\$113,667	\$67,424	\$371,843
<i>Tier 2</i>		\$14,274	\$3,753	\$48,718	\$83,041	\$7,879	\$157,665
<i>Tier 3</i>		\$52,745	\$304,712	\$424,484	\$312,398	\$685,341	\$1,779,680
<i>Tier 4</i>		\$8,744,669	\$411,867	\$972,780	\$1,432,028	\$536,777	\$12,098,120
<i>Tier 5</i>		\$892,349	\$17,024,603	\$20,131,699	\$30,121,735	\$25,112,354	\$93,282,741
All tiers		\$9,761,260	\$17,754,244	\$21,701,902	\$32,062,869	\$26,409,775	\$107,690,050
Central Administrative Office							
<i>Tier 1</i>			\$0	\$0	\$7,405	\$0	\$7,405
<i>Tier 2</i>			\$264,223	\$0	\$0	\$51,351	\$315,574
<i>Tier 3</i>			\$0	\$0	\$13,098	\$0	\$13,098
<i>Tier 4</i>			\$0	\$297,818	\$0	\$0	\$297,818
<i>Tier 5</i>			\$2,050,946	\$6,661,525	\$2,844,423	\$1,633,600	\$13,190,494
All tiers			\$2,315,169	\$6,959,343	\$2,864,926	\$1,684,951	\$13,824,389

Table 6B: Distribution of generated tax credits, by tier, year, and type of credit

	1996	1997	1998	1999	2000	2001	All years
All credits							
Tier 1	9.1%	9.0%	11.1%	8.1%	9.2%	5.6%	8.9%
Tier 2	3.4%	4.2%	4.2%	2.0%	2.7%	6.3%	3.6%
Tier 3	12.6%	9.7%	10.8%	7.2%	8.7%	5.3%	9.0%
Tier 4	16.7%	22.6%	17.9%	15.6%	14.0%	19.9%	17.8%
Tier 5	58.2%	54.4%	55.9%	67.0%	65.3%	62.8%	60.6%
All tiers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	1996	1997	1998	1999	2000	2001	All years
Jobs	17.3%	11.1%	15.0%	16.2%	13.7%	10.8%	14.0%
M&E	82.7%	84.4%	76.5%	71.8%	65.1%	63.9%	74.3%
Worker Training	0.0%	0.3%	0.2%	1.4%	2.5%	2.4%	1.1%
R&D	0.0%	4.2%	7.4%	8.0%	17.2%	21.6%	9.3%
CAO	0.0%	0.0%	1.0%	2.6%	1.5%	1.4%	1.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes for tables 6A, 6B:

Data compiled by James Haag, Division of Policy, Research, and Strategic Planning, NCDOC, June 17, 2003

Generated credits for 1997 for worker training and R&D credits taken from M. Luger, *Economic Effects of the William S. Lee Tax Act: A First Cut Analysis* (Chapel Hill, NC: Office of Economic Development, 1999). Generated credits for 1998 for worker training, R&D, and CAO, from NCDOC, *William S. Lee Quality Jobs and Business Expansion Act: Assessment of Results* (Raleigh, NC: NCDOC, June 2001), Table B-2. All other data from NCDOC database assembled from DOR form 478 returns for 1999, 2000, and 2001, and verified by author.

Table 7A: Credits taken, by tier and type of credit, 1999-2001

	Jobs	M&E	R&D	Wkr Trg	CAO	Total
Tier 1	\$2,186,316	\$4,038,986	\$435,174	\$74,050	\$35,334	\$6,769,860
Tier 2	\$857,783	\$1,573,925	\$4,047	\$250,167	\$111,279	\$2,797,200
Tier 3	\$6,116,753	\$15,371,413	\$1,079,556	\$280,757	\$985,651	\$23,834,129
Tier 4	\$5,847,015	\$8,109,058	\$736,851	\$519,054	\$110,390	\$15,322,367
Tier 5	\$9,018,498	\$47,465,928	\$10,759,754	\$3,076,125	\$1,498,038	\$71,818,343
All tiers	\$24,026,364	\$76,559,310	\$13,015,382	\$4,200,153	\$2,740,691	\$120,541,900

Table 7B: Distribution of credits taken, by tier and type of credit, 1999-2001

	Jobs	M&E	R&D	Wkr Trg	CAO	Total
Tier 1	9.1%	5.3%	3.3%	1.8%	1.3%	5.6%
Tier 2	3.6%	2.1%	0.0%	6.0%	4.1%	2.3%
Tier 3	25.5%	20.1%	8.3%	6.7%	36.0%	19.8%
Tier 4	24.3%	10.6%	5.7%	12.4%	4.0%	12.7%
Tier 5	37.5%	62.0%	82.7%	73.2%	54.7%	59.6%
Among tiers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
All tiers among credits	19.9%	63.5%	10.8%	3.5%	2.3%	100.0%

Note: The tier associated with credits claimed is the tier reported on that year's sub form for credits generated. The claims themselves may be for credits generated by activities in other tiers.

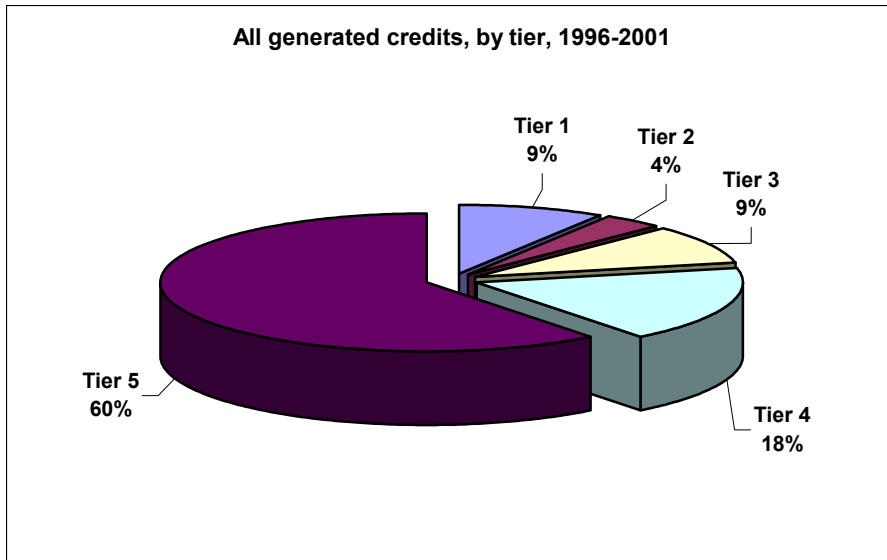


Fig. 3A

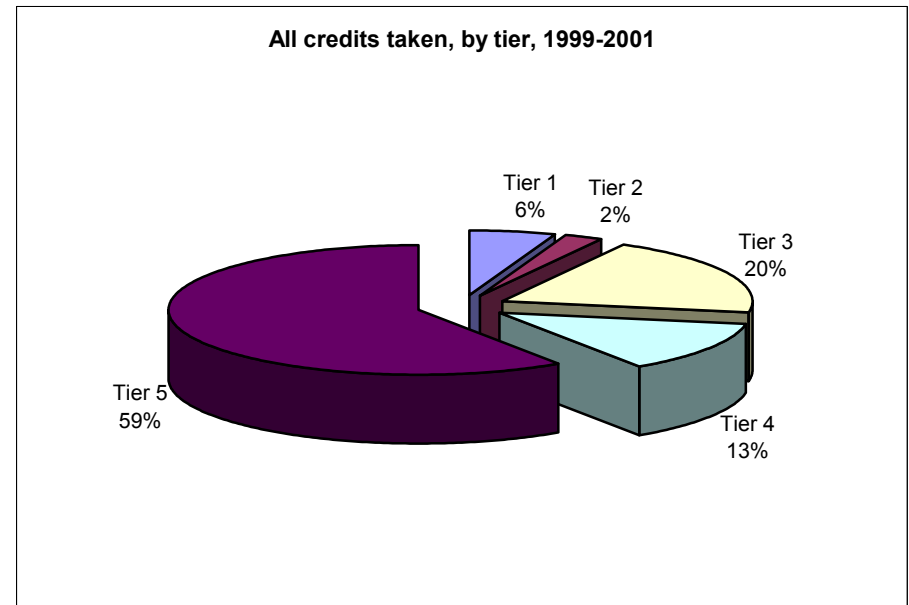


Fig. 3B

Tax credit types, by tier, 1999-2001

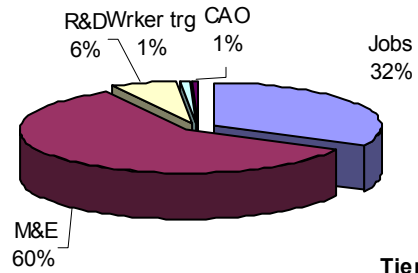


Fig. 4A

Tax credit types, by tier, 1999-2001

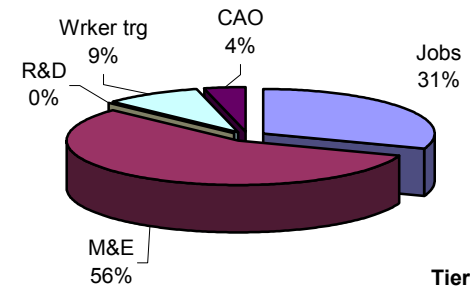


Fig. 4B

Tax credit types, by tier, 1999-2001

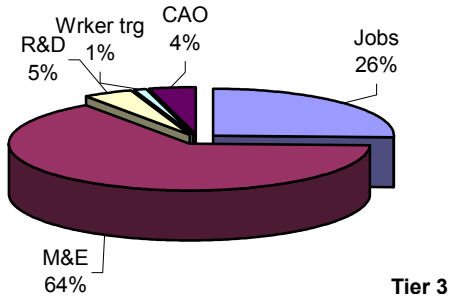


Fig. 4C

Tax credit types, by tier, 1999-2001

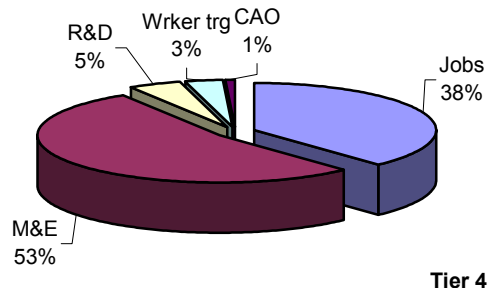


Fig. 4D

Tax credit types, by tier, 1999-2001

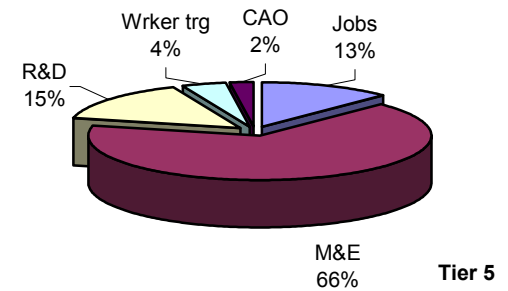


Fig. 4E

Credits taken, by tier, 1999-2001

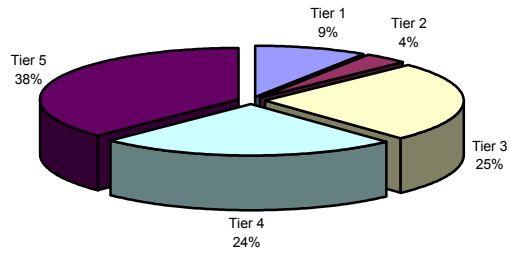


Fig. 5A: Jobs

Credits taken, by tier, 1999-2001

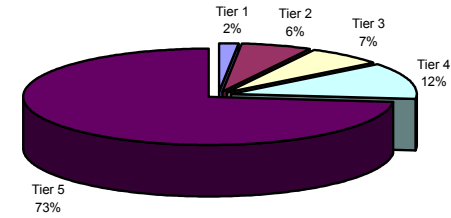


Fig. 5B: M&E

Credits taken, by tier, 1999-2001

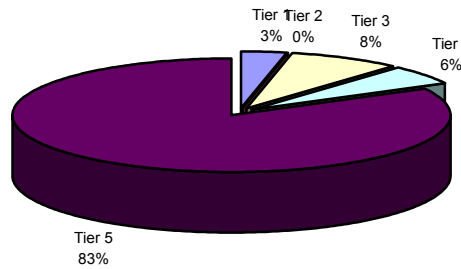


Fig. 5C: R&D

Credits taken, by tier, 1999-2001

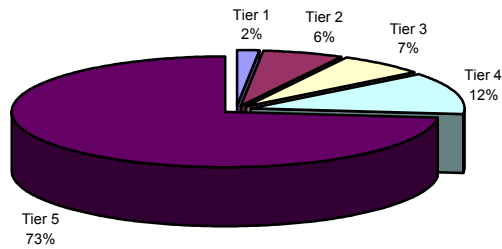


Fig. 5D: Wkr trg

Credits taken, by tier, 1999-2001

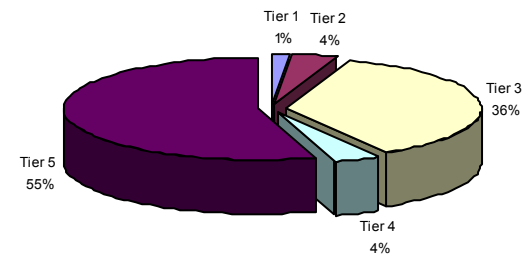


Fig. 5E: CAO

By tier (Tables 6, 7, and 8; Figures 3A, 3B, 4A-4E, 5A-5E)

For much of this discussion we use an aggregation of tax return data from 1996-2001 for credits generated, and 1999-2001 for credits claimed. The 1999-2001 period corresponds to the years processed by the Department of Revenue in 2000 and 2001. Tables 6 and 7 indicate that there is some variation in percentages, but the aggregation is a convenient way to consolidate multiple years of data. The data on credits generated by tier were classified into six groups: the five tiers plus a category for companies whose tier location was unknown (tier 0), usually because the taxpayer filled out a summary form, but not a sub-form on which the tier would have been designated. The data on credits claimed also has an unknown category. The data used to generate the figures (pie charts) were massaged by allocating the values in the multiple and unknown categories to the five tiers in the same proportions as the known activity is distributed. That undoubtedly introduces some bias into the results, but no more than if the tier breakdown were done with the multiple and unknown data omitted completely.

Over the history of the Act, more than 70 percent of all credits generated and claimed have gone to businesses in tiers 4 and 5. 13 percent of the generated credits, and 8 percent of the claimed credits went to businesses in tiers 1 and 2. The lower percentage for credits claimed is not surprising since businesses in more distressed areas are likely to be less profitable, and therefore, have less tax liability to offset.

There is also a concentration of credits by corporation. DOC's analysis of individual tax returns for the 199-2001 period indicates that 25 companies account for 40 percent of all credits taken.

In all tiers, the M&E tax credit accounted for most tax expenditures, representing 53-66 percent of all credit dollars. The jobs tax credit accounted for 26-38 percent of all tax expenditures in tiers 1-4, but only 13 percent in tier 5. The R&D credit was only sizable in tier 5 (15 percent of tax expenditures).

Another way to slice the data is among the tiers, by type of credit. 62 percent of jobs credit expenditures go to tier 4 and 5 businesses, while only 13 percent go to taxpayers in tiers 1 and 2. Most other credit programs are even more skewed toward the better-off tiers. For the M&E, R&D, and worker training credits, the percentages of tax credits going to businesses in tiers 4 and 5 are 85 percent, 89 percent, and 85 percent, respectively. For the CAO credit, the percentage is 59 percent.

One reason more credits go to tiers 4 and 5 is that they have more population and businesses. Table 8 shows the distribution of credits among tiers for 2000 and 2001, normalizing for population and personal income. The patterns are unstable from year-to-year because of differences in credits claimed and tier assignments. But in some years, for some credits, lower tier counties appear to get more of the credits per capita. Similarly, there is no clear pattern when we account for differences in personal income among the tiers, as in the bottom panels of table 8.

Table 8A: Tax credits among tiers, normalized by population and personal income, 2000

<i>Tax credits per capita, by tier</i>					
	Jobs	M&E	R&D	Wrker trg	CAO
Tier 1	\$1.93	\$3.92	\$0.19	\$0.02	\$0.00
Tier 2	\$0.49	\$0.82	\$0.01	\$0.14	\$0.10
Tier 3	\$1.66	\$2.15	\$0.06	\$0.11	\$0.07
Tier 4	\$2.78	\$3.28	\$0.23	\$0.20	\$0.06
Tier 5	\$0.82	\$5.07	\$1.22	\$0.31	\$0.15

<i>Tax credits per \$100,000 of personal income, by tier</i>					
	Jobs	M&E	R&D	Wrker trg	CAO
Tier 1	9.37	19.01	0.94	0.12	0.00
Tier 2	2.39	3.98	0.03	0.71	0.49
Tier 3	7.23	9.34	0.28	0.48	0.32
Tier 4	11.71	13.82	0.96	0.86	0.25
Tier 5	2.64	16.32	3.92	0.98	0.48

Table 8b: Tax credits among tiers, normalized by population and personal income, 2001

<i>Tax credits per capita, by tier</i>					
	Jobs	M&E	R&D	Wrker trg	CAO
Tier 1	\$1.45	\$2.32	\$0.64	\$0.10	\$0.08
Tier 2	\$0.65	\$0.47	\$0.00	\$0.14	\$0.00
Tier 3	\$1.41	\$2.24	\$0.75	\$0.07	\$0.00
Tier 4	\$0.48	\$1.11	\$0.17	\$0.06	\$0.00
Tier 5	\$0.94	\$5.28	\$0.77	\$0.33	\$0.18

<i>Tax credits per \$100,000 of personal income, by tier</i>					
	Jobs	M&E	R&D	Wrker trg	CAO
Tier 1	7.12	11.37	3.16	0.47	0.37
Tier 2	3.14	2.28	0.00	0.67	0.00
Tier 3	6.10	9.69	3.27	0.29	0.00
Tier 4	2.04	4.74	0.71	0.25	0.00
Tier 5	3.03	16.99	2.47	1.06	0.57

Tables 8A and 8B reflect different tier composition of counties, as per table 1.

Sources: Tax credits claimed data from DOR. Population and personal income data from NC LINC and U.S. Bureau of Labor Statistics..

There is no objective, right answer to the question: “are Lee act dollars distributed fairly among the tiers?” In absolute dollars, there is a distinct bias toward the better-off counties. But when we account for existing income differences, the pattern is not as clear.

By industry group (Table 9)

We grouped industries into four clusters that roughly correspond to traditional manufacturing; chemical, paper, and printing; medium capital-intensive manufacturing; and heavier manufacturing and high tech. Appendix A provides more detail. Table 9 summarizes the distribution of tax credit types among industry groups and of industry types within credit categories. As before, we combine all tax returns processed in 2000 and 2001, including some from 1999. Two categories – other and unknown – represent a sizable share of the returns, so we did not allocate them among the known responses, as we did in the tier analysis.

Table 9: Distribution of credits by type of industry, 1999-2001

Industry group		Pct of credits going to industry type		Pct of credits within credit type	
		Generated	Taken	Generated	Taken
Jobs					
NAICS 311-321, 337 & 339	traditional mfg	16.5%	20.0%	16.8%	26.0%
NAICS 322-325	chemical, paper, printing	13.7%	11.6%	7.9%	4.4%
NAICS 326-333	medium capital intensive	14.4%	17.3%	7.4%	9.8%
NAICS 334-336	heavier and high tech	11.1%	25.6%	17.5%	17.2%
Other		11.1%	20.9%	22.9%	29.6%
Unknown		12.8%	19.0%	27.5%	13.0%
Machinery and equipment					
NAICS 311-321, 337 & 339	traditional mfg	75.7%	71.9%	14.7%	29.3%
NAICS 322-325	chemical, paper, printing	60.0%	56.2%	6.5%	6.7%
NAICS 326-333	medium capital intensive	78.0%	73.4%	7.6%	13.1%
NAICS 334-336	heavier and high tech	57.3%	39.9%	17.1%	8.4%
Other		69.9%	59.8%	27.2%	26.5%
Unknown		65.5%	74.2%	26.8%	16.0%
R&D					
NAICS 311-321, 337 & 339	traditional mfg	4.0%	4.7%	2.9%	11.3%
NAICS 322-325	chemical, paper, printing	23.7%	29.3%	9.8%	20.5%
NAICS 326-333	medium capital intensive	2.3%	3.4%	0.9%	3.6%
NAICS 334-336	heavier and high tech	27.7%	22.7%	31.6%	28.1%
Other		16.2%	12.5%	24.2%	32.7%
Unknown		19.5%	3.0%	30.5%	3.8%
Worker training					
NAICS 311-321, 337 & 339	traditional mfg	2.7%	3.0%	16.2%	22.6%
NAICS 322-325	chemical, paper, printing	2.1%	1.3%	6.9%	2.7%
NAICS 326-333	medium capital intensive	3.2%	4.8%	9.8%	15.6%
NAICS 334-336	heavier and high tech	3.9%	11.8%	35.9%	45.4%
Other		0.3%	0.7%	3.8%	5.9%
Unknown		2.2%	2.0%	27.5%	7.8%
Central administrative offices					
NAICS 311-321, 337 & 339	traditional mfg	1.1%	0.4%	14.8%	4.1%
NAICS 322-325	chemical, paper, printing	0.6%	1.6%	4.0%	5.2%
NAICS 326-333	medium capital intensive	2.0%	1.1%	13.4%	5.5%
NAICS 334-336	heavier and high tech	0.0%	0.0%	0.0%	0.0%
Other		2.4%	6.0%	63.8%	74.6%
Unknown		0.1%	1.8%	3.9%	10.6%
TOTAL for ALL CREDITS					
NAICS 311-321, 337 & 339	traditional mfg			12.9%	25.9%
NAICS 322-325	chemical, paper, printing			7.3%	7.5%
NAICS 326-333	medium capital intensive			6.5%	11.3%
NAICS 334-336	heavier and high tech			19.9%	13.4%
Other				26.0%	28.2%
Unknown				27.3%	13.7%

Notes to table 9:

These credit-generated data are from a different source than what is contained in table 6. We used data provided by the DOR, which we discovered to understate credits generated by as much as 50 percent. DOC, which provided the more accurate data from its own analysis of tax records, did not break out the data by our industry groups. We have no reason to believe that the DOR and DOC data differ in terms of their distribution among industry groups. We will update our analysis as data become available.

The percentages for a single NAICS grouping can be summed across credit types to get 100%, in columns 3 and 4. The entries within a credit type can be summed across NAICS groups to get 100% in columns 5 and 6.

Taking all credits together, heavier and high tech manufacturing account for a greater share of tax credits generated than the other known industry groups, but the state's traditional industries account for the most credits taken. Traditional manufacturing businesses take greatest advantage of the jobs and M&E credits. Not surprisingly, heavier manufacturing and high tech make most use of the R&D and worker training credits.

DATA ISSUES IN THE 2003 REPORT

As for the 1999 and 2001 reports, we (as NCDOC's contractor) made a request to the DOR for business tax return data for the 2003 report, presented to us in a way that would allow us to answer the questions listed above. In short, our work order specified that tax returns be indexed by the tier, industry category, age, and taxpayer status of the claimant, to allow multiple sorts on those variables. We provided a list of SIC/NAICS groupings for the industry categories. We were interested in a separate accounting for claimants filing as C-corporations, and for claimants that were paying taxes as a result of profit distributions of S-corporations. We did not care whether the credits were taken against income or franchise tax liability.

We also specified the detailed data we needed from the NC-478 forms. As in past years, we needed the credits generated in each tax year, by type of credit. In most cases, the Lee Act credits generated in year t cannot be claimed until year $t+1$, and then, most are taken in multiple year installments, and in aggregate, they are subject to the 50 percent maximum tax liability offset rule. The cost of the Lee Act to the state in any year is the sum across all taxpayers of the credits generated in all previous years that are actually taken in the year in question. That is what economists call "perpetual inventory" or "vintage" accounting.

In previous years, we did not interact with DOR much between the time the data request was made and when it was delivered. Therefore, we were not aware of the difficulties DOR had in assembling the data we requested. In 2001, we were delayed for some time in the delivery of our by data glitches at DOR which required them to redo the data runs several times.

Between 2001 and 2003, DOR has experienced a turnover in personnel. The individuals who worked on the data in 2001 are no longer at DOR, and the new employees invited our participation in the planning and programming necessary to assemble the data. That has allowed us to understand better the nature of the data problems that affected the timeliness and, most likely, the accuracy, of the previous years' data.

A number of general comments are in order.

- The Lee Act is very complicated. It has multiple types of tax credits within it, subject to many different rules regarding eligibility, installments, carryovers, thresholds, etcetera. That makes the Act difficult for taxpayers to understand and use, and cumbersome to report on their tax returns. So even though the law requires recipients of those credits to provide complete information, there is a high incidence of taxpayer error and omission.

- The tax forms given to businesses to report the Lee Act activity are not user-friendly. Even professional accounting firms have difficulty following instructions and being complete. There are sub forms for detailed information on each type of credit, and summary form where tax credits are aggregated for each year. In many instances, there are inconsistencies between the figures listed on the sub and summary forms due to taxpayer error. In the past, DOR personnel have used their best judgment to reconcile errors and omissions, and that introduces subjectivity bias.
- G.S. 105-129.7 suggests at least that there be thorough post-processing audits of the NC-478 tax returns. The degree to which that is done is constrained by available auditing resources.¹⁸
- The data required for a thorough and accurate analysis of the Lee Act (or any tax program in North Carolina, for that matter) are not all available at the DOR; some are in records maintained by the N.C. Employment Security Commission. ES-202 files do not cover all businesses in the state. The need to match and merge information, by taxpayer ID number, from two different sources introduces a further source of error and incompleteness.

In this round of analysis we confronted eleven specific data problems that affected our ability to report on time and with the breadth and accuracy desired. In many cases, these problems were initially brought to our attention by DOR staff, who then set out to address them. For example, DOR is working with vendors of tax form software to ensure that software will require the completion of subforms in order to prepare summary forms. Those issues are as follows:¹⁹

1. A substantial number of summary forms do not have any (required) sub-forms.
2. A much smaller number of sub-forms do not have accompanying summary forms.
3. The main problem caused by the above “missing data” is that there is an inevitable mismatch between credits claimed (summary form) and credits generated (sub-forms) that has no defensible economic or other substantive explanation.
4. Taxpayer were instructed to use the summary form to display cumulative credits generated in Part 1, but some appear to be displaying credits generated only in the tax year in question. One explanation is that taxpayers who have insufficient liability to utilize their carry forward credits simply do not report them. Consequently, the cumulative credits that are reported underestimate to some degree total credits generated and yet to be taken.
5. The taxpayer was supposed to fill out the sub-forms first and transfer the data to the summary form but it is clear that many did not. Thus we cannot assume that in all cases that the summary and sub-form data for a taxpayer are consistent, and it is impossible to know which is more accurate when and if they differ.

¹⁸ The statutory text is somewhat vague as to whether DOR should audit all NC-478 forms before credits are allowed. It is DOR’s position that the law does not require that.

¹⁹ We acknowledge the input from DOR economist Gregory Sampson in itemizing these issues.

6. Some of the taxpayers in the database clearly confused business property tax credits with Lee Act credits. This biases the Lee Act totals upward some, but probably not significantly since this tended to occur primarily for individuals or businesses that did not have large amounts of credits. (That is not the only bias, so it is unclear what the net effect is.)
7. Tier information in the database is composed of entries by the taxpayer and those DOR entered later (perhaps one third of the total) based on address information on the forms submitted by the taxpayer. Assuming that the taxpayer could correctly identify the appropriate tier(s), the additional information DOR entered undoubtedly includes, in some unknown proportion, tier identities that are based on a location other than the physical location of the plant or firm in question. It is difficult to know how serious a problem this is or the direction of the bias. In the case of firms with only one physical location, the problem is probably minor. In the case of firms with more than one physical location, credits taken for more than one plant, and credits taken for more than one category of credits, the problem could be significant. However, most of these latter instances clearly occurred in firms that had tier 5 mailing addresses and also had the vast majority of their operations in tier 5 locations. In general, we believe the addition of the tier information vastly improves the quantity and quality of the data despite the inevitable errors.
8. Some firms in the database do not qualify for Lee Act credits purely on the basis of their NAICS code. Most of these are likely to be taxpayers who confused business property tax credits with Lee Act credits.
9. The jobs figures for the firms may be overstated, and have not been verified using data from ESC.²⁰
10. Data in the history files (“installments”) should be viewed with caution. Our review of returns indicated inconsistencies by taxpayers in the installment amounts for the same credit reported in successive years. That creates a particular problem comparing across years. In some cases, taxpayers under-report because they do not have sufficient liability to utilize all their carryforward credits.
11. Many forms had missing data of one sort or another. When the missing data are needed to classify by tier or NAICS, for example, an analyst must interpolate using other data (addresses) and human judgment. That is time consuming and a source of possible bias.

²⁰ A previous analysis of returns by DOR had found discrepancies between net employment changes shown in ESC data and the number of jobs shown to have been created on tax returns by firms claiming credits under the job creation tax credit in place prior to the Lee Act. If such discrepancies continue to exist under the Lee Act, then some taxpayers may be claiming more job creation credits than are appropriate. This problem could be particularly acute in the past several years, when firms have been shedding employees. Technically, it is still possible for a firm that is reducing employment to qualify for job creation credits, depending on their original employment levels when the credits were first claimed. But it is possible that some are claiming credits on (net) jobs created that are long gone. (From a memo to Edward Feser from Karl Knapp, June 30, 2003).

During our interaction with DOR staff in the first quarter of 2003, we received anecdotal accounts of the severity of the reporting problem referenced above. (DOR has reported separately to the legislature about some of the problems that have led to a large underpayment of taxes.) To get a more objective sense of the problem, we conducted a random sample of 100 tax returns for 2001, all requesting Lee Act credits. We found the following:²¹

- 17 percent had no (6), incomplete (10) or incorrect (1) sub forms
- 45 percent did not have a NAICS code
- 42 percent did not indicate the type of taxpayer they were (C-corp, partnership, trust, etc.)
- 33 percent did not indicate any taxpayer address, another 25 percent omitted the county (used to verify the tier)
- 43 percent did not indicate the tier in which activity occurred, either because page 1 of the sub form was missing (24), the entire sub form was missing (6) or the field was left blank (13)
- 16 percent had discrepancies between the sub and summary forms regarding the amount of the eligible credit

This incidence of error is of considerable concern to DOR and NCDOC. For NCDOC, the big problem is its inability to assess the real costs of the Lee Act as a central component of the state's economic development arsenal. And poor data limit DOR's ability to efficiently audit the use of credits by taxpayers and to evaluate the fiscal effects of possible changes to the tax credits.²²

For all these reasons, we must be cautious about pushing the results of this analysis too far. At the very best, we are measuring gross trends. In any case, these difficulties require evaluators to take extra care in assembling the data and verifying its accuracy. Without some simplifications in the law, reformatting of tax forms, and better monitoring of returns, care alone may not be sufficient to produce a credible report.

Our major recommendation in this report is to improve the data collection, recording, and reporting procedures. The partnership that developed around this year's report, among NCDOC, which is concerned about the effectiveness of tax incentives for economic development, DOR, whose Tax Research Division is developing the analytic capacity to track the fiscal impacts, and UNC's Office of Economic Development, which is positioned to put the technical questions into a broader perspective, and provide objectivity, is very promising for future analyses. But sufficient resources are required to conduct the analysis in a timely and complete manner.

²¹ Subsequent to our sampling, DOR staff went back to many tax forms and added tier designations. Over the years that type of manual intervention has become routine. It is time consuming, and subject to error. Nonetheless, our sample therefore overstates the severity of the problem of missing tier data.

²² From interviews with DOC and DOR senior staff.

APPENDIX A

NAICS Code Descriptions

311 – Food Manufacturing
312 – Beverage and Tobacco Manufacturing
313 – Textile Mills
314 – Textile Product Mills
315 – Apparel Manufacturing
316 – Leather and Applied Products Manufacturing
321 – Wood Product Manufacturing
337 – Furniture Manufacturing
339 – Miscellaneous Manufacturing

Roughly Equivalent to SIC 20-25 from previous report – Traditional Manufacturing

322 – Paper Manufacturing
323 – Printing and Related Support Activities
324 – Petroleum and Coal Manufacturing
325 – Chemical Manufacturing

Roughly Equivalent to SIC 26-28 from previous report

326 – Plastics Manufacturing
327 – Nonmetallic Mineral Product
331 – Primary Metal Manufacturing
332 – Fabricated Metal Product Manufacturing
333 – Machinery Manufacturing

Roughly Equivalent to SIC 30, 32-35 from previous report - Medium Capital Intensive Manufacturing

334 – Computer and Electronic Products
335 – Electrical Equipment, Appliances, Component Manufacturing
336 – Transportation Equipment Manufacturing

Roughly Equivalent to SIC 36-39 from previous report – Heavier and Higher-Tech Manufacturing

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