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Report to Rep. Carl D. Perkins, Chairman, House Committee on Education and Labor: Elementary, Secondary and Vocational Education Subcommittee; Rep. Albert H. Quie, Ranking Minority Member; by Elmer B. Staats, Comptroller General.

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Authority: Educational Amendments of 1974.

An update was made of a prior analysis of the economic impact of federally connected children on school districts to reflect changes made to the impact aid program by the Education Amendments of 1974. The updated analysis showed similar results to the original study. While the original 1976 report showed that 48% of the school districts studied would need property tax increases of less than 5% to replace impact aid payments, this figure was 42% in the current study. At the other extreme, the percentage of local educational agencies which would need property tax increases of 25% or more increased from 15% to 19% during this period. (SC)

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-164031(1) JULY 13, 1978

The Honorable Carl D. Perkins, Chairman
The Honorable Albert H. Quie, Ranking Minority Member
Subcommittee on Elementary, Secondary
and Vocational Education
Committee on Education and Labor
House of Representatives

This report is in response to your request of June 27, 1977. You asked us to update our analysis of economic impact of federally connected children on school districts to reflect changes made to the impact aid program by the Education Amendments of 1974, which became effective in fiscal year 1976. Our analysis was presented in our report, "Assessment of the Impact Aid Program," dated October 15, 1976 (HRD-76-116).

On December 19, 1977, we informed your staff that our updated analysis showed similar results to our first study. For example, in the October 1976 report we stated that if impact aid entitlements were withdrawn, 48 percent of the school districts studied would need property tax increases of less than 5 percent to replace impact aid payments. Our updated analysis showed that 42 percent of the school districts studied would need property tax increases of less than 5 percent to replace impact aid payments. At the other extreme, in the earlier report we stated that 15 percent of the local educational agencies would need property tax increases of 25 percent or more, whereas our updated analysis showed that 19 percent of the agencies would need increases of this magnitude.

To make the analysis, we obtained property tax information from the States involved and related that information to their fiscal year 1976 applications for section 3 impact aid funds. The format for the updated analysis was structured to be used with the original analysis; thus, we suggest referring to the October 1976 report for explanations of program terminology and background. For information on data base, study assumptions, and methodology in doing the study, we suggest reading pages 41 through 43 of that report.

HRD-78-132
(104072)

As you know, the Education Amendments of 1974 changed the impact aid program in the following manner:

1. Program eligibility was expanded to include handicapped children of military personnel, handicapped children residing on Indian lands, and children from public housing. Payments received must be used to meet the needs of these children.

2. Payment provisions were revised to require that, for years when annual appropriations are not sufficient to cover total entitlements, the Commissioner of Education is to pay percentages of such total entitlements according to a three-step payment procedure.

3. Four so-called "saving or hold-harmless" clauses were established:

   a. A school district must get at least 80 percent of its previous year's section 3 payment (the guarantee is 90 percent if the district was 10 percent or more dependent upon section 3 for total current expenditure revenue in fiscal year 1973).

   b. A school district's payment shall not be less than 90 percent of the previous year's entitlement if the school, during July 1, 1973, through June 30, 1975, experienced a decrease in eligible section 3 children of 10 percent or more due to a military decrease announced after April 16, 1973.

   c. A school district must get at least 90 percent of the previous year's payment if section 3(b) out-of-county and out-of-State children constitute 10 percent or more of a district's total section 3(b) children.

   d. A school district whose section 3 payments (using the three-step payment procedure) are reduced for low-rent public housing children will receive a special payment for these students.

Our updated analysis results are shown in the enclosure in the same formats that we used in the October 1976 report. Although we have included explanatory comments before and after the tables, the earlier report may be useful as a guide in reviewing this new information.

As arranged with your office, we will send copies of this report to interested parties and make copies available to others upon request.

Elmer B. Staats
Comptroller General
of the United States

Enclosure

ENCLOSURE I

UPDATED ANALYSIS OF ECONOMIC IMPACT OF FEDERALLY CONNECTED CHILDREN ON SCHOOL DISTRICTS

We made statistical analyses on local educational agencies (LEAs) in 15 States 1/ for fiscal year 1976 and found that without 3(a) and 3(b) impact aid entitlements:

--42 percent of 1,436 LEAs for which tax information was available would need property tax increases of less than 5 percent; another 19 percent would need increases of 5 to 10 percent; and 19 percent would need increases of 25 percent or more.

--An increase of less than $25 in annual property taxes on a home with a market value of $40,000 would result for 44 percent of the 1,437 LEAs 2/ having tax information; an increase of $25 to $50 would result for 25 percent; and an increase of $100 or more would result for 17 percent.

EFFECT OF WITHDRAWAL OF ALL 3a AND 3b ENTITLEMENTS

We compared the percent of impaction (percent of federally connected children to total LEA average daily attendance) to the percent of increase in taxes that would result from the loss of all 3(a) and 3(b) entitlements. The following table shows the number of LEAs that would be affected and the increases in local property taxes that would be needed to replace the aid.

1/Although 16 States were considered in our first analysis, data was available for only 15 for this updated analysis.

2/The number of LEAs differs from the previous analysis above because the data necessary to make this calculation was available for one additional LEA.

Percent of impaction (note a)	Percent change in taxes 0 to 4.99	5 to 9.99	10 to 14.99	15 to 19.99	20 to 24.99	25 or more	Total number of LEAs
0 to 2.99	119	5	-	-	-	-	124
3 to 5.99	329	80	16	3	4	5	437
6 to 9.99	133	82	43	16	7	20	301
10 to 24.99	25	108	75	50	25	79	362
25 or more	-	2	6	11	19	174	212
Number of LEAs affected	606	277	140	80	55	278	1,436
Percent affected	42.2	19.3	9.7	5.6	3.8	19.4	100

a/Percent of impaction represents total 3(a) and 3(b) children divided by total average daily attendance.

The results show that about 62 percent of the LEAs analyzed would require tax increases of less than 10 percent and 42 percent would require increases of less than 5 percent to replace impact aid entitlements. Entitlements for 606 LEAs requiring less than a 5-percent increase in fiscal year 1976 totaled about $114.7 million, and entitlements for the 277 LEAs requiring a 5- to 10-percent tax increase totaled about $32.3 million. Based on full entitlements of $281.5 million for the 1,436 LEAs analyzed, about 52 percent of the entitlements were provided for LEAs which would require an increase of less than 10 percent in taxes to replace entitlements.

Although most of the LEAs analyzed would require less than a 10-percent increase in local taxes, 278 (or 19 percent) would require an increase of 25 percent or more. LEAs requiring more than a 25-percent increase in taxes accounted for about $64.9 million (or about 23 percent) of all entitlements for the 1,436 LEAs we analyzed in the 15 States.

Loss of 3(b) entitlements

Because the Congress and the various Administrations have given little consideration to eliminating aid for 3(a) children, we also tested the effect of the withdrawal of 3(b) entitlements only. Most LEAs could replace their lost entitlements with only a small increase in local property

ENCLOSURE I

taxes. About 55 percent of the LEAs analyzed would require an increase of less than 5 percent in property taxes, and another 22 percent would require an increase of 5 to 10 percent. Six percent of the LEAs would require a tax increase of 25 percent or more. Changes in taxes based solely on loss of 3(b) entitlements are shown in the following table.

Percent of impaction (note a)	Percent change in taxes: 0 to 4.99	5 to 9.99	10 to 14.99	15 to 19.99	20 to 24.99	25 or more	Total
0 to 2.99	121	3	-	-	-	-	124
3 to 5.99	353	70	8	2	1	3	437
6 to 9.99	174	79	33	8	3	4	301
10 to 24.99	92	126	70	35	19	20	362
25 or more	45	33	30	22	23	59	212
Number of LEAs affected	785	311	141	67	46	86	1,436
Percent affected	54.7	21.7	9.8	4.7	3.2	6.0	100

a/Percent of impaction represents total 3(a) and 3(b) children divided by total average daily attendance.

In the 1,096 LEAs requiring a property tax increase of less than 10 percent, the 3(b) aid totaled $146.2 million, which was about 52 percent of the total 3(a) and 3(b) entitlements for the LEAs analyzed. For the 785 LEAs requiring less than a 5-percent increase, 3(b) aid totaled about $112.8 million, about 40 percent of the 3(a) and 3(b) entitlements for all LEAs analyzed. Our estimates of the effect of loss of aid are conservative because we used 100 percent of the entitlements and school year 1973-74 property valuations in our analysis. Whenever funds appropriated for section 3 are not adequate to pay total entitlements, the funds are prorated. Prorations were necessary in fiscal years 1951 and 1955 and in every year since fiscal year 1967. However, even under conservative assumptions concerning loss of aid, our analysis showed that most LEAs would not have to impose major tax increases to replace 3(b) aid.

Dollar effects of loss of impact aid

Because not all States place the same stress on local property taxes to finance education, large percentage

ENCLOSURE I

changes in taxes are not always large dollar changes and vice versa. Therefore, we calculated the dollar changed in taxes on a home with a market value of $40,000 to determine whether stating the effects in this manner would show any major differences from the percentage change analyses. We calculated the annual increase in taxes assuming (1) section 3(a) and 3(b) aid were lost and (2) only section 3(b) aid was lost.

Annual Dollar Increase in Taxes on $40,000 Home
Both 3(a) and 3(b) Aid Lost

Percent of impaction	$0 to $24.99	$25 to $49.99	$50 to $74.99	$75 to $99.99	$100 or more	Total
0 to 2.99	123	1	-	-	-	124
3 to 5.99	338	81	15	1	3	438
6 to 9.99	117	132	35	10	7	301
10 to 24.99	52	135	75	36	64	362
25 or more	1	13	14	18	166	212
Number of LEAs affected	631	362	139	65	240	a/1,437
Percent affected	43.9	25.2	9.7	4.5	16.7	100

a/The number of LEAs differs from previous analysis because the data necessary to make this calculation was available for one additional LEA.

Annual Dollar Increase in Taxes on $40,000 Home
Only 3(b) Aid and Entitlement Lost

Percent of impaction	$0 to $24.99	$25 to $49.99	$50 to $74.99	$75 to $99.99	$100 or more	Total
0 to 2.99	123	1	-	-	-	124
3 to 5.99	359	63	12	1	3	438
6 to 9.99	160	110	19	7	5	301
10 to 24.99	141	119	61	21	20	362
25 or more	67	32	26	30	57	212
Number of LEAs affected	850	325	118	59	85	1,437
Percent affected	59.2	22.6	8.2	4.1	5.9	100

An increase of less than $50 in annual local property taxes on a home with a market value of $40,000 would result for 69 percent of the LEAs without 3(a) and 3(b) entitlements and for 82 percent without their 3(b) entitlements. Our analyses showed that a great majority of LEAs--especially those with low percentages of federally connected children--could replace their entitlements with only small monetary, as well as percentage, changes in local taxes.

Federal impact and prosperous LEAs

Throughout the years, many have objected to the payment of large amounts of impact aid to more prosperous LEAs, primarily in the Washington, D.C., suburban areas with very high per capita incomes. These LEAs have received large amounts of aid mainly because large numbers of 3(b) children reside in them.

We analyzed seven LEAs in one State (Virginia) adjacent to Washington, D.C., and found that three had such high percentages of federally connected children that fairly large increases in taxes--10 percent or higher--would be needed if their aid were withdrawn, as shown in the following table.

Percent of Increase in Taxes--Aid Withdrawn

	Section 3(a) and 3(b)			Section 3(b) only	
	Percent of impaction	Entitlement	Percent of increase in taxes	Entitlement	Percent of increase in taxes
Arlington Co.	14	$ 1,882,896	7	$ 1,555,580	6
Fairfax Co.	24	15,119,313	16	13,292,679	14
Alexandria	24	1,764,505	10	1,764,505	10
Prince Wm. Co.	23	2,835,158	16	2,805,409	15
Loudoun Co.	17	560,091	8	560,091	8
Fairfax City	17	395,750	8	395,750	8
Falls Church	11	93,777	5	93,777	5

The local taxes in these LEAs are generally higher than in other LEAs in the State, so impact aid evidently has not been used to maintain lower taxes.

FEDERALLY CONNECTED CHILDREN AND LEA PROSPERITY

The basic rationale for impact aid payments is that the Federal Government, by owning property and removing it from the tax rolls, creates a burden on LEAs when children of Federal employees are sent to their schools without providing funds to offset the tax revenues lost. On the other hand, the presence of a Federal installation could stimulate an area's economy. As stated in our previous report, one HEW-financed study concluded that heavily impacted LEAs tend to have lower taxes, lower ratios of pupils to teachers, and higher per pupil expenditures than lightly impacted LEAs.

We analyzed data from 15 States to determine the relationship between increasing percentages of federally connected children and taxable property values and how such relationships might be reflected in such school financing indicators as (1) tax rates applied to property values to raise revenue for schools, (2) per pupil expenditures, and (3) ratios of pupils to teachers. 1/ Taxes available for schools are the product of some measure of property valuation times a tax rate. Assessment rates determine what proportion of total property values will be taxed, and millage rates are the tax rates applied to the assessed valuations. In our analysis tax rate is defined as the product of the millage rate times the assessment rate and is the rate that would be applied to total property valuation to determine the amount of taxes to be paid. This procedure places all LEAs on the same basic taxing structure.

We further analyzed the data from these States to determine what effect withdrawal of impact aid funds would have on the relationship with tax rates. In general, the following conditions would prevail.

1. Increasing percentages of federally connected children tend to show a slight association with lower property values per pupil, but the association is very weak 2/ and is not consistent across all 15 States, with 6 of the 15 States showing an association with higher property values per pupil.

2. Increasing percentages of federally connected children generally are associated with lower tax rates to raise revenue for schools, higher per pupil expenditures, and lower ratios of pupils to teachers, but the associations are not consistent across all 15 States.

3. Increasing percentages of federally connected children are associated with higher tax rates to raise revenues for schools when taxes are

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1/Correlation analysis was used to test for relationships between percentages of federally connected students and the other factors listed. Details are given on page 13.

2/Terms such as "weak association" or "strong association," etc., will be used to describe the results of the mathematical calculations that are necessary to make these correlation analyses. See page 14 for the exact numerical meaning of these terms.

adjusted for loss of impact aid funds, but most of the relationships are moderately weak. In one State, even after this adjustment, increasing percentages of federally connected children are still associated with lower taxes.

The conclusion for these relationships is that heavily impacted LEAs appear to be associated with favorable school financing indicators but that withdrawal of aid could change the tax relationships considerably if current levels of educational funding are to be maintained. The fact that heavy impaction does not show a stronger relationship with taxes adjusted for loss of aid, however, confirms our previous analysis that many LEAs would not require much higher taxes if impact aid were withdrawn. Although our results cannot be considered representative of the entire Nation, they indicate that large percentages of federally connected children do not necessarily constitute serious economic burdens on LEAs.

Property value per pupil

Part of the rationale for impact aid is that LEAs must educate the children of Federal employees without being able to tax the properties on which these employees live or work. Therefore, if the presence of Federal installations was an economic burden, large percentages of federally connected children should be associated with lower dollar amounts of taxable property per pupil. The 15 States did show a very weak association between large percentages of federally connected children and lower dollar amounts of taxable property per pupil, but some States showed an association of larger percentages of such children with higher property values per pupil. The relationships, both for individual States and in total, were generally very weak or moderately weak. One State showed a moderately strong relationship between large dollar amounts of taxable property per pupil and larger percentages of federally connected children.

Taxes adjusted for loss of impact aid

Although increasing percentages of federally connected children are generally associated with lower local tax rates to raise revenue for schools, loss of impact aid funds would change these relationships considerably if the LEAs increased their taxes to replace lost aid funds. If local taxes for schools were adjusted for loss of aid, large numbers of federally connected children would be associated with higher taxes in all but one State. Four of these relationships are moderately strong and one is very strong. However, most of the relationships are not strong, and one State still shows an association between large numbers of federally connected children and lower taxes.

The reversal in correlation values (the change in relationships because of the loss of impact aid funds) indicates that impact aid funds have enabled many heavily impacted LEAs to keep their local taxes for schools down. The fact that highly impacted LEAs do not show a strong association with high tax rates even after aid is withdrawn indicates that unlike some LEAs in Virginia (see p. 6), many heavily impacted LEAs still have lower tax rates to raise revenue for schools than lightly impacted LEAs, which is consistent with our previous analysis of changes in tax resulting from loss of aid. (See pp. 1 to 6.)

COMPARISON OF IMPACTED AND NONIMPACTED LEAs

Comparison of impacted and nonimpacted LEAs within a State can show some effects of federally connected children on LEAs. Impacted and nonimpacted LEAs from the 15 States in our analysis differed greatly on several important characteristics. For example, LEAs receiving impact aid funds were generally the largest and most prosperous within a State. On the other hand, to raise the same amount of local revenue per child as LEAs not receiving aid, impacted LEAs in most States analyzed, on the average, would have to have higher property taxes than nonimpacted LEAs if the aid were not available. The fact that this was not true in all States showed that the presence of federally connected children does not necessarily create a heavy tax burden.

Property valuation for tax base

LEAs receiving impact aid in the 15 States had larger average daily attendance (ADA) and higher taxable property valuation than those not receiving such aid. Two reasons for this are that (1) most very large LEAs were impacted and (2) most very small LEAs were not.

ADA for LEAs

States	Impacted LEAs Number	Impacted LEAs ADA	Nonimpacted LEAs Number	Nonimpacted LEAs ADA
Colorado	86	5,352	95	756
Connecticut	33	5,417	125	3,393
Idaho	67	1,819	48	1,082
Illinois	164	5,013	889	1,613
Indiana	49	4,294	258	3,397
Massachusetts	121	5,421	258	1,727
Michigan	61	9,560	532	2,648
Montana	123	706	492	151
New Hampshire	41	2,008	124	587
New York	156	10,111	595	2,717
Oklahoma	339	1,210	297	468
Pennsylvania	108	7,010	396	3,441
Rhode Island	18	4,767	22	3,360
Virginia	61	10,578	69	4,336
Wyoming	25	2,227	35	758

Property Valuation Per LEA

States	Impacted LEAs Number (note a)	Impacted LEAs Property valuation (millions)	Nonimpacted LEAs Number (note a)	Nonimpacted LEAs Property valuation (millions)
Colorado	86	$216.5	95	$ 38.7
Connecticut	33	296.3	125	206.6
Idaho	67	95.1	48	60.8
Illinois	164	144.5	893	50.9
Indiana	49	152.0	257	128.8
Massachusetts	106	187.0	209	68.8
Michigan	61	456.2	535	125.8
Montana	123	23.4	492	8.6
New Hampshire	41	96.4	124	32.9
New York	156	608.7	577	108.1
Oklahoma	339	54.3	273	30.7
Pennsylvania	108	237.4	396	101.1
Rhode Island	18	289.4	22	173.3
Virginia	61	425.9	68	130.6
Wyoming	25	101.2	35	55.7

a/The numbers of LEAs shown for certain States vary from the numbers shown in the preceding and following tables because some LEAs could not provide all data required for all three tables.

Although the previous analyses showed that the impacted LEAs in the 15 States have higher average daily attendance and property valuation than other LEAs, further analysis shows that in most of the States impacted LEAs tend to have lower property valuation per pupil than the nonimpacted LEAs. Our analysis showed the following regarding property value per pupil.

Property Valuation Per Pupil (note a)

States	Impacted LEAs Number	Impacted LEAs Property value per pupil	Nonimpacted LEAs Number	Nonimpacted LEAs Property value per pupil	Difference in property value per pupil
Colorado	86	$40,500	95	$51,100	$-10,600
Connecticut	33	54,700	125	60,800	-6,100
Idaho	67	52,300	47	56,200	-3,900
Illinois	164	28,800	889	31,700	-2,900
Indiana	49	35,400	257	37,800	-2,400
Massachusetts	106	31,400	209	37,100	-5,700
Michigan	61	47,700	532	47,800	-100
Montana	123	33,100	479	56,800	-23,700
New Hampshire	41	48,000	123	56,100	-8,100
New York	156	60,200	577	38,600	21,600
Oklahoma	339	44,900	273	62,700	-17,800
Pennsylvania	108	33,900	396	29,400	4,500
Rhode Island	18	60,700	22	51,600	9,100
Virginia	61	38,000	68	29,700	8,300
Wyoming	25	45,400	35	73,500	-28.100

a/This analysis is weighted by the size of the LEAs involved.

Analysis of tax rates

The differences in property value per pupil noted above are also reflected in the tax rates that impacted LEAs would have to levy to maintain the identical level of local per pupil revenue as nonimpacted LEAs, as shown in the following table. In 11 of the 15 States, impacted LEAs, on the average, would have to levy a higher tax than nonimpacted LEAs.

Calculated Tax Rates Necessary to Maintain Identical Levels of Local Per Pupil Revenue

States	Impacted LEAs	Nonimpacted LEAs	Difference in tax per $1,000 of property valuation
	Tax Per $1,000 of Property Valuation (note a)		
Colorado	$13.39	$10.60	$ 2.79
Connecticut	20.42	18.37	2.05
Idaho	4.09	3.81	.28
Illinois	22.22	20.21	2.01
Indiana	14.47	13.56	.91
Massachusetts	36.08	30.53	5.55
Michigan	11.21	11.19	.02
Montana	26.93	15.69	11.24
New Hampshire	19.70	16.88	2.82
New York	11.81	18.44	-6.63
Oklahoma	9.01	6.46	2.55
Pennsylvania	6.99	8.06	-1.07
Rhode Island	11.18	13.16	-1.98
Virginia	9.85	12.58	-2.73
Wyoming	16.70	10.32	6.38

a/These tax rates are real tax rates, that is, assessment percentages times millage tax rates. These rates should be applied to property values at 100-percent valuation to determine total taxes. This procedure was necessary because LEAs tended to assess property values at different levels so millage tax rates were not comparable.

In the four States where impacted LEAs have lower tax rates than nonimpacted LEAs, the impacted LEAs are definitely more prosperous. The impacted LEAs in these States not only have larger property valuations than the nonimpacted LEAs but they also have a larger property valuation per pupil. This is true even though no funds are provided through property taxes for some federally connected students in these States.

In two of the three States (Montana and Wyoming) where impacted LEAs have much higher tax rates than nonimpacted LEAs, a large proportion of the impacted LEAs have very large percentages of federally connected children. For example, 13 of 25 impacted LEAs in one State and

50 of 123 impacted LEAs in the other had more than 25 percent federally connected children in their school systems.

DETAILS OF CORRELATION ANALYSIS

We analyzed data from 15 States to determine the relationship between increasing percentages of federally connected children and taxable property values and how such relationships might be reflected in such school financing indicators as tax rates applied to property values to raise revenue for schools, per pupil expenditures, and ratios of pupils to teachers.

Correlations of Percent of Impaction with Selected Variables (note a)

States	Real property value per pupil	Per pupil expenditure	Pupil to teacher ratio	Tax rate	Tax rate adjusted for loss of aid
All 15 States	-.0064	.0034	-.2480	-.1496	.2763
Colorado	.0467	.0990	.0036	-.2159	.6268
Connecticut	-.1276	-.0309	-.1548	.0109	.2298
Idaho	.1929	.2412	-.2210	-.0676	.5648
Illinois	-.0774	.0109	-.0968	-.2455	.3492
Indiana	-.1631	-.0353	.0461	-.0637	.3843
Massachusetts	.0349	-.0191	.0442	.0144	.1202
Michigan	-.0734	.0800	-.2437	-.5035	.7399
Montana	-.1117	.3740	-.3309	-.2373	.4177
New Hampshire	.6021	.4705	-.5744	-.3565	-.2758
New York	.0315	.1017	-.2416	-.2451	.1032
Oklahoma	-.0943	.2106	-.2684	-.1811	.6408
Pennsylvania	-.0024	.1926	(b)	.0348	.2104
Rhode Island	-.1800	.1561	-.4202	-.3302	.0787
Virginia	-.0980	.0500	.1768	.2115	.4100
Wyoming	.0875	.6359	-.4913	-.5362	.5459

a/Correlation analysis is a statistical technique which shows the degree to which changes in given variables are associated with one another. Positive correlation coefficients indicate direct relationships (increases associated with increases), while negative coefficients indicate inverse relationships (increases associated with decreases).

b/Data for this element not available.

The closer a coefficient is to 1 or -1, the greater the extent to which the changes in two variables are associated with one another. Values close to zero indicate almost no relationship. For our purpose, we classified correlation coefficients as follows:

.7 or greater (-.7 or less)	Very strong
.5 to .699 (-.5 to -.699)	Moderately strong
.25 to .499 (-.25 to -.499)	Moderately weak
Less than .25 (0 to -.249)	Very weak